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INDIANA UNIVERSITY OF PENNSYLVANIA
INDIANA, PENNSYLVANIA

Indiana Bulletin 1973-1974

Undergraduate Courses

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THIS BULLETIN CONTAINS ANNOUNCEMENTS OF COURSES FOR THE ACADEMIC YEAR 1973–74. THIS UNIVERSITY RESERVES THE RIGHT TO REPEAL, CHANGE, OR AMEND THE RULES, REGULATIONS AND COURSES CONTAINED IN THIS BULLETIN AT ANY TIME.

TUITION AND FEES ARE SUBJECT TO CHANGE.

INDIANA UNIVERSITY OF PENNSYLVANIA IS COMMITTED TO AFFIRMATIVE ACTION TO ASSURE EQUAL OPPORTUNITY FOR ALL PERSONS, REGARDLESS OF RACE, COLOR, RELIGION, NATIONAL ORIGIN, ANCESTRY OR SEX AND WELCOMES QUALIFIED STUDENTS, FACULTY AND STAFF FROM ALL SUCH GROUPS.

Indiana Bulletin

Undergraduate Catalog

1973-1974

INDIANA UNIVERSITY OF PENNSYLVANIA
INDIANA, PENNSYLVANIA

VOLUME 79 FEBRUARY, 1973 NUMBER 1

THIS UNIVERSITY IS ACCREDITED BY THE NATIONAL COUNCIL FOR ACCREDITATION OF TEACHER EDUCATION, THE MIDDLE STATES ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS AND THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN.

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INDIANA, PENNSYLVANIA

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INDIANA UNIVERSITY OF PENNSYLVANIA
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1973–74 ACADEMIC YEAR CALENDAR

FALL SEMESTER – 1973

Registration Begins	Wednesday, September 5–7
Undergraduate Classes Begin	Monday, September 10
Graduate Classes Begin	Saturday, September 8
Election Day – no classes	Tuesday, November 6
Thanksgiving Recess Begins at Close of Classes	Tuesday, November 20
Thanksgiving Recess Ends 8:00 a.m.	Tuesday, November 27
Final Examinations Begin	Saturday, December 15–21
Semester Ends at the Close of Final Examinations	Friday, December 21

SPRING SEMESTER – 1974

Registration Begins	Wednesday, January 16–18
Undergraduate Classes Begin	Saturday, January 19
Graduate Classes Begin	Saturday, January 19
Spring/Easter Recess Begins at Close of Classes	Tuesday, April 2
Spring/Easter Recess Ends 8:00 a.m.	Tuesday, April 23
Final Examinations Begin	Friday, May 11–17
Semester Ends at Close of Final Examinations	Friday, May 17
Alumni Day	Saturday, May 18
Commencement	Sunday, May 19

THE UNIVERSITY

PURPOSES OF THE UNIVERSITY

As a multi-purpose institution, Indiana University of Pennsylvania encompasses the Schools of Arts and Sciences, Business, Continuing and Non-Resident Education, Education, Health Services, Home Economics, Fine Arts and the Graduate School. Indiana University of Pennsylvania endeavors to fulfill the primary purposes of education as stated by Alfred North Whitehead, namely, "To stimulate and guide student self-development" so the student learns how to make a living and how to live. The University extends this educational opportunity to those students whose conscientious application and serious motivation indicate promise of substantial achievement.

As Emerson noted in his Journal over a hundred years ago, "The things taught in schools and colleges are not an education but the means of education." At Indiana University of Pennsylvania, these "means of education" comprise a variety of factors. First, there is a pervasive, intellectual climate designed to stimulate the student's imagination, stretch his mind, and extend his tolerance as he rubs minds with new ideas, teachers, and associates in the classroom, laboratory, and library. These intellectual contacts also tend to develop critical independent judgments, mental discipline, and the ability to make mature decisions.

The various curricula are carefully structured to provide the student with a broad perspective enabling him to appreciate his cultural heritage and affording him the opportunity to pursue in considerable depth his particular sphere of interest. Such a comprehensive program inevi-

tably includes some knowledge that is worth knowing, not for any material gain, but simply because it enriches one's existence. Also, the wide spectrum of courses which a student takes frequently contains at least one or two in which a student will have little interest or skill, but these too have their values, for, as T. S. Eliot has observed: "No one can really become educated without having pursued some study in which he took no interest." The vast bulk of the program, of course, will both absorb and challenge the motivated student.

Undergirding the entire academic program is the philosophy that in the final analysis there is no education except self-education. Consequently, the faculty strive to whet intellectual appetites and to inculcate the problem-solving approach, so that the student will acquire both the desire and the ability to teach himself. In this way, Commencement truly will become the beginning of "life-long learning."

In addition to enabling students to acquire professional skills and enrich their cultural existence, the University endeavors to instill in each student a social consciousness, which will make him a contributive and substantive member of society, for as de Tocqueville emphasized, we cannot have a strong democratic society without a good quality of citizenship. This attribute of good citizenship accrues partly from academic study and partly as a result of the social mores and associations which one encounters and experiences in college.

Intertwined with the goal to increase the student's social awareness and consideration for his fellow men is the development of moral fibre. General Omar N. Bradley is duly disturbed by the fact that "ours is a world of nuclear giants and ethical infants." Indiana University of Pennsylvania firmly believes that no education, regardless of its academic excellence, can fulfill its true potential unless students are inspired and guided by spiritual values and moral considerations.

Admittedly the University cannot succeed in realizing all of these goals; however, even this is part of the dynamic educational process of becoming rather than attaining.

This University welcomes qualified students, faculty, and staff from all racial, religious, ethnic, and socio-economic backgrounds.

HISTORY OF THE UNIVERSITY

Throughout the entire history of the University at Indiana, great emphasis has been placed on maintaining high academic standards and providing adequate facilities conducive to individual and group growth. The present record and reputation enjoyed by the University have evolved during almost a century's history. Growing out of the need for a teacher training institution in Western Pennsylvania, the General Assembly passed an act in the legislative session of 1871 granting aid for the establishment of a Normal School in the Ninth District, at Indiana.

The first building was completed and opened for students on May 17, 1875. This building, named John Sutton Hall in honor of the first president of the Board of Trustees, is still in use and in very good condition.

The steady growth of the institution has caused a continuous expansion in its building program and many new buildings have followed that edifice of tradition — John Sutton Hall. The size and natural beauty of the University campus offer ample opportunity for recreation in an environment conducive to personal enjoyment. The main campus of the University, originally consisting of 23 acres with one building, is now composed of 95 acres on which are located 58 principal halls, 20 other buildings, and seven athletic fields. The University Lodge, located a few miles from Indiana and surrounded by 280 acres of wooded hillside, offers opportunity for nature study and numerous University activities.

In April, 1920, control and ownership of the school passed to the Commonwealth of Pennsylvania. In May, 1927, by authority of the General Assembly, the State Normal School became a college, with the right to grant degrees. The name was then changed to the State Teachers College at Indiana, Pennsylvania. In 1950 the ROTC Program was established. The name of the institution was changed again, in 1960, to Indiana State College, setting the stage for a liberal arts program which graduated its first students in January, 1964.

In December, 1965, Indiana was redesignated the Indiana University of Pennsylvania and given the right to expand its curricula offerings and to grant degrees at the master's level, as well as in a number of additional areas at the doctoral level.

Since the founding of the University in 1875, Indiana has graduated over 35,000 students, and since the University became a degree-conferring institution in 1927, over 26,000 degrees have been granted. Many of the graduates are organized into a strong Alumni Association, with units active in many sections of Pennsylvania, as well as in New York, Michigan, and the District of Columbia. The Alumni Association cooperates with the University in many projects designed to better the institution and for the welfare of the students.

ACCREDITATION

The Indiana University of Pennsylvania is a state-owned and state-controlled institution for higher education. It is a multi-purpose institution, composed of eight schools.

The University is an approved and fully accredited member of the Middle States Association of Colleges and Secondary Schools, the American Association of University Women, and the National Council for the Accreditation of Teacher Education, the three acknowledged accrediting agencies for institutions in this region. The fact that this University is a member of these three organizations is of immediate personal importance to the individual student in two ways: first, the student may transfer college credits from one approved institution to another without loss in case he finds it necessary to change colleges; and second, the student who is a graduate of an approved institution is eligible for a better position.

LOCATION

Located in Indiana Borough, Indiana County seat, in the foothills of the Alleghenies at an elevation of about 1,300 feet, the Indiana University of Pennsylvania is ideally situated for cleanliness and beauty. The University is easily accessible by automobile over excellent state highway routes coming from all sections of the state. These leading routes are Route 422 east and west, Route 286 northeast and southwest, and Route 119 north and south. Bus passenger services operate on frequent schedules to and from Indiana and all nearby cities and towns, including Pittsburgh, Altoona, Johnstown, Butler, Punxsutawney, Kittanning, DuBois, Ridgway, New Castle and others. Indiana is also served by bus connections with the main line of the Pennsylvania Railroad at Johnstown and Pittsburgh.

BUILDINGS AND GROUNDS

The campus at Indiana is frequently described as one of the most beautiful in the country. Located in the Borough of Indiana, the main campus contains approximately 95 acres and includes 78 major buildings. In the center of the campus is the historic Oak Grove, about which are grouped many of the main buildings, forming three sides of a quadrangle.

STABLEY LIBRARY

The Rhodes R. Stabley Library was completed in the spring of 1961. The three story, air-conditioned building houses 450,000 volumes and provides study room for about 550 students.

An instructional program in the use of library tools and reference books is presented by the staff to develop skills in library use. The well-organized general holding is enhanced by the reference collection, 3900 current magazines, extensive files of bound magazines, 600,000 units of microforms, 5,000 filmstrips and 4,000 recordings.

Most materials are available by the "open stack" system which encourages the habit of using books freely.

COMPUTER CENTER

The Computer Center, established in July, 1963, is located in the heart of Indiana's main campus. The Center provides computational support for undergraduate and graduate courses, faculty and student research, and the administrative requirements of the University. The computing capacity of the Center is provided by a large-scale disk oriented central processor which supports both time-sharing and batch processing services for the university community. Typewriter terminals, located both in the Computer Center and in various departments on campus, permit the use of the computer on a time-sharing basis. Keypunching facilities and a full complement of tabulating equipment are available in the Computer Center for student use. Additional keypunching facilities are also available in many departments on campus. Aid in the use of the computer and facilities may be obtained from user assistants on duty at the Computer Center, and from the Center's professional staff.

Indiana's Computer Center plays an active part in the daily functioning of the University. It is the principle laboratory facility for computer-oriented courses and is used as a teaching aid in many classes involving statistical and numerical analyses and computer simulations. The staff at the Center is actively involved in continuing work aimed at making computers a more effective and readily accessible tool for both the academic and administrative segments of the university community.

ADMISSION AND REGISTRATION

GENERAL STATEMENT ON ADMISSIONS POLICY

Any graduate of an accredited four-year high school is qualified to apply for admission to Indiana University of Pennsylvania. Applications may be filed beginning July 1 after the prospective student has completed the third year of his high school program. Applications filed before completion of the junior year will be returned to the sender.

Since the physical facilities of the University limit an entering freshman class, not all qualified applicants can be admitted. Applicants are approved on the basis of an examination of high school records, recommendations of high school principals and guidance counselors, and scores made on the College Board Aptitude tests. A University Admissions Committee establishes policy and approves or rejects applications.

Although the University does not require a specific number of high school credits in certain subject matter fields, it does strongly urge all applicants to take the usual college preparatory program in high school. Applicants should also take all available work offered in the field in which they plan to major.

Applicants are expected to name their major field upon application, but a change in major can be made during the freshman year without loss of credit. A change of major after the freshman year usually entails a loss of credit and results in a program of more than 4 years to satisfy graduation requirements.

Application papers and catalogs are available upon request to the Admissions Office.

The Admissions Office
Indiana University of Pennsylvania
Indiana, Pennsylvania 15701

APPLICATION FEE

When the student submits his application, he must enclose a CHECK or MONEY ORDER (cash will not be accepted) for $10.00, payable to the Indiana University of Pennsylvania. This fee is non-refundable. This money will be used to meet the cost of filing and processing his application.

The application form, and the $10 application fee must be mailed, together with the high school transcript, to the Business Office, Indiana University of Pennsylvania, Indiana, Pennsylvania 15701.

FRESHMAN APPLICANTS

The Scholastic Aptitude Test

All students expecting to apply for admission should plan to take the Scholastic Aptitude Test ("College Boards") on or before the November test date of the senior year of high school. The Admissions Committee recommends that the student first take the test in the spring of his junior year because his application, if complete, may receive early consideration in the fall of his senior year. If he has an excellent high school record and strong College Boards scores, his application for admission may be approved by November 1 of his senior year.

Whether or not the student takes the College Boards in his junior year, it is recommended that he also take the College Boards no later than the November testing date of his senior year. The Admissions Committee gives the applicant the benefit of the highest total Board scores from all test dates. It is, therefore, in many instances, to the applicant's advantage to take the Boards in the senior year. However, the Committee will use the Boards completed in the junior year if the senior Boards are not available at the time Admissions decisions are being made.

The student should arrange to take the College Boards through his high school principal or guidance counselor,

or, by writing to the College Entrance Examination Board, Box 592, Princeton, New Jersey 08540 for an information pamphlet and test application.

When the student receives the information and test application, he should fill out the test application and designate Indiana University of Pennsylvania as one of the schools he desires to receive a copy of his test scores. The test application is to be returned to the Princeton, New Jersey, address.

The University will accept the test battery of the American College Testing Program (ACT) in lieu of College Boards (SAT).

The Admission Application

Applications for admission will be available after June 1 following the student's junior year of high school.

The student may fill out and submit the application and accompanying forms to his guidance counselor after July 1 of the summer following completion of his junior year. The deadline for applications for early consideration is October 1. These deadlines apply for both semesters of the subsequent year. Limited housing and classroom facilities make the above closure date necessary.

The applicant should give his completed application form and the $10 application fee to his high school principal or guidance counselor for completion of the high school record portion of the application. The principal or counselor must then mail the complete packet of admissions materials to the Business Office, Indiana University of Pennsylvania, Indiana, Pennsylvania 15701.

The student's application is complete when the Admissions Committee receives his Junior College Board and/or Senior College Board or ACT test results, his high school record, the completed application form, and the application fee. In some cases the Committee may request additional information, such as a list of senior year subjects or a senior grade report.

What Happens After The Application is Complete?

(1) The Admissions Committee reviews, with care and understanding, each of the several thousand applications that are submitted each year.

(2) Those persons who, in the Committee's judgment, satisfy the standards for early admission will receive notification by November 1 of their senior year. Decisions on most applications are deferred until later in the year. Final action on a completed application takes from 8 to 16 weeks, depending on the number of applications that must be processed. This delay is necessary if each application is to be examined carefully. Applicants who are not given early admission can expect a decision by February 15 of their senior year.

(3) The student who is admitted to an entering class is required to visit the campus on an appointed date to discuss his academic and career plans with his School Dean and other advisors. Choosing a major and possible career is an important problem for young men and women. It is hoped that early consultation with knowledgeable advisors will help the student make these crucial decisions. The date of this appointment for the orientation interview accompanies the notice of acceptance.

(4) A medical examination form is mailed to every applicant at the time his admission is confirmed. This form is to be completed by the applicant's family physician.

(5) Attendance at the orientation interview and payment of the $15 orientation fee signifies the student's interest, but NOT commitment, to attend Indiana University of Pennsylvania.

(6) Around May 1st a $100 advance payment is required of all incoming Freshmen. This advance payment will be credited to the student's housing charges and basic fees.

TRANSFER STUDENTS

A student who has been attending another college or University and wishes to transfer to Indiana University of Pennsylvania must submit an official transcript of all college work and a statement from his Dean certifying that he is in good academic standing and entitled to honorable Separation from that institution. High School transcripts and college boards and/or ACT scores should also be submitted. All of these items should be mailed to the Dean of Admissions, Room 216E, Pratt Hall. If the student is not eligible to continue at his present college for academic or other reason, he should NOT attempt to transfer to Indiana University of Pennsylvania. Only students with good academic records will be considered.

The application deadlines for transfer students is January 15 for the academic year.

APPLICATIONS FOR PART-TIME STUDY

Any high school graduate who lives within reasonable commuting distance of the University is eligible for part-time study.

Students who plan to participate in the part-time study must obtain the application from the Admissions Office.

Applications for part-time study must be in the Admissions Office before:

August 15 for Fall Semester
December 15 for Spring Semester

NOTE: A new application form must be completed prior to EACH SEMESTER for part-time study.

The student should arrange to have a copy of his transcripts from other colleges and universities that he has attended sent to the Admissions Office.

At the end of 15 credit hours of course work taken at I.U.P., a part-time student must have a 1.8 cumulative quality point to continue. At the end of 30 credit hours taken at I.U.P., a part-time student must have a cumulative quality point average of 2.0 to continue.

Degree Candidacy

A part-time student MAY apply for degree candidacy after completion of 15 credit hours of work in academic subjects and maintenance of a cumulative quality point

average of 2.0 or better. A part-time student MUST apply and be approved for degree candidacy by the time he has earned 30 credit hours. STUDENTS WHO HAVE NOT BEEN APPROVED FOR DEGREE CANDIDACY AT THE END OF 30 CREDIT HOURS OF PART-TIME WILL NOT BE PERMITTED TO CONTINUE AT THE UNIVERSITY.

The appropriate forms for application for degree candidacy are available in Room 216, Pratt Hall. It should be specified on the forms whether full-time or part-time degree candidacy is desired. Part-time degree candidates must submit the part-time form prior to each semester of study and schedule courses with the part-time students. Full-time degree candidates will schedule courses with other full-time students.

READMISSION POLICY FOR STUDENTS WHO WITHDRAW FROM THE UNIVERSITY VOLUNTARILY

A student who withdrew from the University on a voluntary basis for reasons of health, financial difficulty, etc., and who wishes to re-enter, must notify, in writing, the Dean of the School in which the student was enrolled at the time of his withdrawal AND the Office of the Dean of Students before April 1, if requesting readmission for that year's summer sessions or for the Fall semester (starting in September). Written requests must be made to the above-mentioned offices before November 1, if requesting readmission for the Spring semester starting in January.

PRE-SCHEDULING AND REGISTRATION

Students who are in full-time enrollment status are given the opportunity to pre-schedule for the next semester of attendance. Regularly enrolled students will pre-schedule and pre-register during the middle of the first semester for the second semester, and during the middle of the second semester for the following first semester, and in May for Pre-Summer session.

Prospective freshmen will prepare a program of studies with departmental advisors during interview dates preceding the semester of entrance.

All students will be billed and pay fees by mail for the first and second semesters of each year.

THE SUMMER SESSIONS

The Summer School is an integral part of the year's work. Students from other colleges, teachers in service, and students in regular attendance can secure, in the summer session, credits toward any certificate or toward graduation in any curriculum. The courses are planned primarily for those who are accelerating their work. An effort is made to meet all reasonable requests of teachers who are working toward higher certification or toward graduation.

All courses given in the summer session require the same amount of time and are granted the same credit as if taken during a regular semester. The Summer Bulletin will be mailed to anyone desiring more complete information regarding the courses to be offered.

DATES. Three sessions, two of 3 weeks and one of 6 weeks, are planned for the summer of 1973. The pre-session will open Monday, June 4 and close Friday, June 22. The main session starts Monday, June 25 and continues to Friday, August 3. The post-session opens Monday, August 6 and closes Friday, August 24. It is thus possible for a student to secure 3 to 12 credits by attending the summer school.

Address the Registrar for the Summer Sessions Bulletin indicating courses and activities of the Summer Session. Normally, Summer Sessions Bulletins are available after March 1.

FINANCES

FEES AND CHARGES

The University reserves the right to change its charges without notice.

Basic Fees

The basic fee for all full-time in-state students is $350.00 per semester. This fee covers registration and the keeping of student records, use of the library, student welfare, health services (other than extra nurse and quarantine), and laboratory facilities.

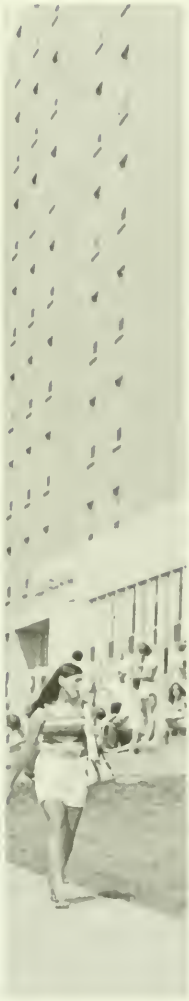
Out-of-state full-time students pay a basic fee of $700.00 per semester.

The basic fee for part-time in-state students is $29.00 per semester hour. A part-time student is one taking 11 or fewer semester hours. See the sections on Admission and Registration and on University Policies for further information concerning part-time students.

The basic fee for part-time out-of-state students is $46.00 per semester hour.

An in-state student is defined as one who is a bona fide resident of and domiciled within the State of Pennsylvania for a reasonable period, not less than one year, immediately preceding his or her registration for a term or semester in any State-supported college or university in the State of Pennsylvania. A minor will generally be presumed to be a resident of the place of his parents' or guardian's domicile.

The establishment of domicile is primarily a matter of continued residence and intention. Generally, Pennsylvania domicile is considered to be established upon the comple-



tion of at least 12 months of continuous residence within the State at the time of registration for courses.

Other Fees

ADVANCE REGISTRATION FEE. A non-refundable confirmation fee of $15 must be paid by each student accepted for enrollment. This confirmation fee will be used to cover the cost incurred by the University on the students' behalf during Freshman Orientation Day on campus and Fall Freshman Orientation.

HOUSING FEE. The housing fee for students is $360.00 per semester. This includes room, meals in one of the college dining rooms, and laundry of sheets and pillow cases. This applies only to full-time students, as part-time students are not permitted to live in University dormitories or residences.

See the section on Housing for details concerning housing policies at the University.

STUDENT ACTIVITY FEE. An activity fee is collected from all students and administered through the Student Cooperative Association under regulations approved by the Board of Trustees. This fee, of $30.00 per semester, covers the cost of student activities in athletics, lectures, entertainment, student publications, etc., and is payable in one sum for the semester at the time of registration. The Student Activity Fee is $11.00 for part-time students.

LATE REGISTRATION FEE. Each student registering after the date officially set for registration is required to pay an additional fee of $1.00 per day until the student is in regular attendance (except when permission for late registration has been secured in advance from the President because of illness or other unavoidable causes), provided that the total amount of the late Registration Fee shall not exceed $5.00. The same regulation shall apply to approved inter-semester payments.

BAD CHECK CHARGE. Students making checks payable to "Indiana University of Pennsylvania" which are not acceptable to the bank because of insufficient funds will be charged $10.00 for each bad check.

PRIVATE INSTRUCTION IN MUSIC. The vocal and instrumental fee per semester is $70.00. This charge is in addition to credit hour costs.

MILITARY FEE. An Activity Fee of $3.00 is required of ROTC Cadets to cover the cost of Cadet Corps functions.

ESTIMATED EXPENSES PER SEMESTER

	In-State	Out-of-State
Basic Fee	$350.00	$ 700.00
Housing Fee	360.00	360.00
Student Activity Fee	30.00	30.00
Books and Supplies (estimated)	50.00	50.00
Total	$790.00	$1,140.00

Miscellaneous and travel expenses would be in addition to the above.

Summer Sessions Fees

BASIC FEE. The basic fee for students enrolled for any of the regular summer sessions is $29.00 per semester hour. The minimum basic fee per session is $87.00.

The basic fee for students who are not residents of Pennsylvania is $46.00 per semester hour, and the minimum charge is $138.00 for each session.

HOUSING FEE. For the Main Summer Session, this fee is $120.00, and for the Pre- and Post-Sessions, $60.00. This fee includes room, meals, and the laundry of sheets and pillow cases.

See the section on Housing for housing-policy details at the University.

STUDENT ACTIVITY FEE. For the Main Summer Session, this fee is $10.50, and for the Pre- and Post-Sessions, $5.25, payable at time of registration.

Special Fees

INFIRMARY FEE. After three days in the University Infirmary, the University shall charge students who regularly eat in a University dining room an additional $1.00 for each day. Students who room at the University but do not eat in a University dining room shall pay $3.00 per day after the third day. Commuter students admitted to the infirmary shall pay board at the rate of $3.00 per day from the first day of admission. Service at the infirmary includes the regular nurse and regular medical service but does not include special nurse or special medical service.

DEGREE FEE. A fee of $5.00 to cover the cost of a diploma must be paid by each candidate for a degree.

TRANSCRIPT FEES. Applications for official transcripts must be made ONLY IN WRITING to the Registrar, either by U.S. Mail, or on forms available at the Transcript Window in Clark Hall. Such requests MUST include:

(1) Your full name and social security number as of your graduation or termination of enrollment at I.U.P. (Please note any name changes since graduation);

(2) Your present address;

(3) Whether you are requesting a transcript of your undergraduate and/or graduate work;

(4) Whether you graduated or if not, when you were enrolled;

(5) The full and clearly stated name(s) and address(es) of to whom you wish the transcript(s) sent;

(6) The payment of the transcript fee of one dollar ($1.00) per transcript. (Checks or money orders should be made out to Indiana University of Pennsylvania). There is no charge for the first transcript requested.

Any requests which are not accompanied by the proper fees or information will be returned to the senders for inclusion of them. No transcript requests will be processed without the payment of transcript fees.

DAMAGE FEE. Students are responsible for damages, breakage, loss, or delayed return of University property.

BILLING AND PAYMENTS

All bills, including basic fee and housing fee, are payable as specified on the bill for at least the first nine weeks. Checks or money orders, in the exact amount of the account, should be made payable to the account designated on the bill. Book Store purchases are on a cash basis.

Time of Payments

Payment in full of all Pre-Session fees ..... June 4, 1973
Payment in full of all Main Summer
Session fees ..... June 25, 1973
Payment in full of all Post-Session Fees .. August 6, 1973
Payment of the first half
of first semester ..... August 15, 1973
Payment for the second half
of the first semester ..... Oct. 31-Nov. 3, 1973
Payment for the first half
of the second semester ..... December 28, 1973
Payment for the second half
of the second semester ..... Mar. 23-Mar. 26, 1974

It is desired that payments for the entire semester be made in August for the first semester and in December for the second semester; however, the half-payment option may be exercised, if necessary.

Delinquent Accounts

Students will not be permitted to enroll for any semester, nor to graduate, until all bills previously incurred have been paid; nor will credit be certified to any other institution or to the Department of Education until all overdue accounts have been paid.

Students desiring to leave school before the close of a semester must report to the Vice President of Student Affairs, and to the Business Office to settle all unpaid accounts.

REFUNDS

The refund policy at Indiana University of Pennsylvania, including the Armstrong County and Punxsutawney Branch Campuses, is as follows:

(1) Students withdrawing from courses, the dormitories, and/or dining rooms, upon receiving approval from the authorized administrative official DURING any part of

the first six (6) weeks of the semester, will be granted a refund equal to one half (1/2) of the semester fee.

(2) Students withdrawing from courses, dormitories, and/or dining rooms, upon receiving approval from the authorized administrative official AFTER the first six (6) weeks of the semester, will not be entitled to any refund of the semester fees.

(3) Personal illness, military obligation, death, or other reasons for which the Dean of Students feels refunds should be granted will be handled on an exceptional basis; however, refunds will not exceed one half (1/2) of the semester fee.

(4) No portion of summer school fees will be refunded, with the exception of those cited in (3) above.

(5) In those instances where a portion of the fees meet the criteria for refund, the student or parent must file an application for refund with the Dean of Students at the University.

FINANCIAL AID

The financial aid program at Indiana University of Pennsylvania is administered through the office of the Director of Financial Aid. A single financial aid application form is used for all University student aid programs, including the various scholarships and student loan funds. Entering freshmen will find the financial aid application attached to the Admission application. Upperclassmen may obtain forms in the Financial Aid office, in Pratt Hall.

Financial aid at Indiana University of Pennsylvania is awarded in the form of a scholarship, a grant-in-aid, a loan, part-time employment, or a combination of any of these. The policy is to help as many students as possible within the resources available, and thus the University may "package" these forms of aid in such a way as to meet the needs, as far as possible, of every student.

Any full-time undergraduate, graduate, or transfer student who has been accepted for admission is eligible for consideration.

All financial aid candidates must file a Parent's Confidential Statement with the College Scholarship Service, Box 176, Princeton, New Jersey, prior to February 1. A copy of this statement is to be forwarded to Indiana University of Pennsylvania. High school seniors may obtain

a copy from their secondary school guidance counselor, and current University students can obtain a copy at the University's Financial Aid Office.

Students who have been awarded an outside form of aid should notify the Financial Aid Office before the start of school.

Unless otherwise specified by the terms of the grant, all financial aid awards are granted for a period of one academic year. Reapplication forms may be secured at the Financial Aid Office.

Academic standing is reviewed each year and if a student is not in good standing or is on disciplinary probation, he may have his aid discontinued.

Application for financial aid does not constitute application for admission to the freshman class. Applicants must be admitted before being considered for student aid. March 15 is the deadline for incoming freshmen to submit an application for aid for the following September, and November 1 is the deadline for those entering the following January.

Upperclass students who wish to receive aid consideration must file a new or renewal application form each year they desire aid. The necessary forms may be obtained from the Financial Aid Office.

Scholarships

Scholarship grants carry no obligation for repayment. They are gifts to the academic, talented, or financially needy student. A listing follows.

M. VASHTI BURR MEMORIAL AWARD. The sum of $125 is awarded annually to that student of Indiana University of Pennsylvania who is deemed by the faculty to be most deserving, having in mind his or her economic need and the excellence of his or her industry and scholarship. This award is given through the generosity of Mr. William V. Whittington, Washington, D.C.

CLARK SCHOLARSHIP. The Lieutenant Alpheus Bell Clark Memorial Scholarship was established by Mr. and Mrs. Steele Clark, Cherry Tree, Indiana County, in memory of their son. The sum of $100.00 is awarded each semester to that young man or woman, a senior in the University and a resident of Indiana County, who in the opinion of a committee chosen by the President, best

qualifies for the honor in terms of academic ability, leadership, and service to the University, with preference going to a veteran, or a son or a daughter of a veteran.

EDUCATIONAL OPPORTUNITY GRANTS. Under the Economic Opportunity Act of 1964, the University receives a sum of money to be given to students from "exceptionally low-income families," in grants of $200 to $1,000 a year. However, this grant must be matched by some other aid from either the institution or an outside source. These grants may be for 4 years, but must be renewed each year.

EXTENSION HOMEMAKER SCHOLARSHIPS. Homemakers participating in the Home Economics Extension program contribute funds annually for scholarships to be given to sophomores, juniors or seniors who are majoring in Home Economics in several colleges in the state. Indiana is alloted several each year, to be awarded on the basis of 4-H experience, need, scholarship and other outstanding characteristics. Each award is for $200.00 a year.

THE G. G. HILL AWARDS. Two awards of $30 each are given each spring to a male and to a female junior in Business Education. The recipients are selected on the basis of scholarship, responsibility, participation in activities, and personality. The scholarship is given by Phi Beta Lambda (Future Business Leaders) in honor of Mr. G. G. Hill, founder and former chairman of the Department.

THE PATTI HURLEY SCHOLARSHIP. A 4-year scholarship of $150.00 per year is awarded to a female graduate of Indiana Area High School attending the University, based upon academic achievement, participation in school activities, and economic need. This memorial scholarship was established by the family and friends of Patti Hurley, a 1970 graduate of Indiana Area High School who was killed in an automobile accident 2 weeks after high school graduation and prior to entering college.

KAPPA DELTA PI SCHOLARSHIPS. The Kappa Delta Pi Scholarship was established by the Beta Gamma Chapter, at this University, to honor that member of the sophomore class who is judged to be the ideal university student. This award of $25 is made each year by a committee of the local chapter and is awarded on the basis of scholarship. Beginning with the 1961-62 college year, Beta Gamma Chapter also offers an award of $25.00 to the

graduate student at Indiana University of Pennsylvania with the best academic record.

LAW ENFORCEMENT GRANT PROGRAM. LEEP is a Federal assistance program designed to help the Nation's criminal justice system — police, courts and corrections — by enhancing the quality of the criminal justice personnel through opportunities for higher education.

Grants are available to cover tuition and mandatory fees up to $300 per semester. The program is applicable only to full-time employees of publicly funded police correction agencies or the court.

The student may be enrolled on a full- or part-time basis in a graduate or undergraduate program in courses of study related to law enforcement or suitable for a person employed in law enforcement.

RAY METZEL MELLOWMEN SCHOLARSHIP. One scholarship is given annually to a junior or a senior who is a member of the Mellowmen upon recommendation of members of the Music Department. The scholarship is worth $200 for one year.

MONDAY MUSICAL CLUB STRING SCHOLARSHIP. The Monday Musical Club of Indiana, Pennsylvania, gives a scholarship in the amount of $100, good for one year only, to a string major in the Music Department.

The Club also gives a $100 Scholarship to a Homer Center High School senior who is going into the music field.

MORRIS SCHOLARSHIPS. The Helen Wood Morris Scholarships were established by Lieutenant-Colonel L. M. Morris, of Altoona, in memory of his wife, a graduate of the University. Sums of $125 each are awarded annually to students selected by a committee named by the University, one award to a sophomore, the other to a junior. Students chosen must be in the highest quarter of their class, must be in need of financial assistance, and must have demonstrated worthiness in terms of character, personality, leadership, and American citizenship.

OPERATION FRIENDSHIP SCHOLARSHIP. Two awards of $25 each and a certificate are given by Dr. Norah E. Zink, Professor Emeritus of the Geography Department, to foreign students who have made a significant contribution to cooperation and good feeling in the University and community during the university year. These awards are given during the Spring.

ETHYL V. OXLEY SCHOLARSHIPS. Each year the Alumni of the School of Home Economics award $75.00 scholarships to one, two, or three outstanding students in the school. Awards are based on evidence of such characteristics as dependability, initiative in worthwhile professional experiences, accepting responsibility, social sensitivity and sincerity in dealing with people, sense of values, personality and scholarship.

PENNSYLVANIA FEDERATION OF WOMEN'S CLUBS SCHOLARSHIPS. At least four scholarships of $100 each are offered annually to students in the Art Education Department. These scholarships are provided by voluntary contributions from clubs to "Pennies For Art Fund," by the Pennsylvania Federation of Women's Clubs.

PRESSER FOUNDATION SCHOLARSHIP. The Presser Foundation of Philadelphia awards two scholarships each year to music students at the Indiana University of Pennsylvania. The amount varies from year to year. Interested music students should apply through the Chairman of the Music Department.

QUOTA CLUB SCHOLARSHIPS. The Quota Club of Indiana has established a scholarship of $100 per year, for senior girls in Speech and Hearing. Those interested in applying for this scholarship should contact the Director of Speech and Hearing for information.

ROTC SCHOLARSHIPS. The United States Army offers several 1, 2, 3, and 4 year scholarships at the University. These scholarships pay for tuition, laboratory fees, textbooks, and other required expenses except room and board. In addition, the student receives $100 per academic month for the duration of the scholarship, except for a 6-week Summer Camp Program, where the pay is one-half the rate for a second lieutenant per month. To qualify, the student must complete the ROTC program and must display a strong desire for a career as a Regular Army Officer. Instructions on how to apply may be obtained from the Professor of Military Science.

THE LENORA PECHAN SCHOLARSHIP. The Lenora Pechan Scholarship was established by the late Dr. Albert R. Pechan, a former member of the Senate of the Commonwealth of Pennsylvania and of the Board of Trustees of the Indiana University of Pennsylvania, to grant approximately $50 to students who are members of the

Reserve Officer Training Corps and who have been outstanding students in the ROTC, and whose other academic work is satisfactory. First priority will be given to students from Armstrong County, selected by the officers of the Reserve Officers Training Corps and the Faculty Scholarship and Loan Committee.

HANNAH KENT SCHOFF MEMORIAL SCHOLARSHIP. Annually a scholarship worth $600 is awarded to two entering freshmen at Indiana University of Pennsylvania. Applicants must be graduates of Pennsylvania High Schools who wish to prepare for teaching. Application forms may be obtained by writing the Financial Aid Office, Indiana University of Pennsylvania, Indiana, Pennsylvania. Applications must be filed prior to March 1st of each year.

SECONDARY EDUCATION CLUB SCHOLARSHIP. The Secondary Education Club grants a 1-year scholarship of $50 to an upperclassman in Secondary Education.

SERVICE CLUB SCHOLARSHIPS. The Kiwanis, Lions, and Rotary Clubs of Indiana, Pennsylvania, have scholarship programs that provide financial aid for approximately 16 students per year at Indiana University of Pennsylvania. These scholarships are administered by the local service clubs, with assistance from the Financial Aid Office at the University.

SIGMA XI RESEARCH AWARD. The Indiana Club of the Society of Sigma Xi has established an award to honor a junior or senior who has demonstrated high achievement in independent research and is enrolled in one of the academic areas under the purview of Sigma Xi. The award is made each year in the spring semester by a committee of the Sigma Xi Club.

STRING SCHOLARSHIP FUND. Information on this scholarship for a music student majoring in strings can be secured from the Music Department. Thanks are expressed to the following for their contributions: Bruno's Restaurant; National Bank of the Commonwealth in Indiana, Pennsylvania; Indiana Music House; and Pepsi Cola Bottling Corporation.

STUDENT ART SCHOLARSHIP AWARD. Students of the Department of Art and Art Education contribute art works to be sold. Funds thus received permit awards of

$50.00 to be made periodically. Applications are received and screened and awards made by a committee of art students. This award is confined to students of the Art Department.

STUDENT GOVERNMENT FOREIGN STUDENT SCHOLARSHIPS. The Student Government Association grants four full scholarships annually to foreign students who have not previously been in the United States, and who can complete their proposed program in one academic year. Applications should be submitted to the Foreign Student Adviser no later than March for the following year.

SYNTRON FOUNDATION SCHOLARSHIPS. Through the Syntron Foundation of Homer City, four 4-year scholarships are awarded annually to freshmen, each worth $500 per year. Presently, 19 scholarships are in effect each year. Preference is given to graduates of Blairsville, Homer City, and Indiana High Schools and other high schools in the county. Applications must be filed with the Director of Financial Aid by March 2. Nine of these scholarships are identified as C. S. Weyandt Memorial Scholarships and the other nine are identified as J. A. Metz Memorial Scholarships.

J. M. UHLER MEMORIAL SCHOLARSHIPS. In honor of a former President of the University and a past President of the Indiana Kiwanis Club, the Club awards a $100 per semester scholarship for 4 years to a recipient showing adequate scholastic progress. These scholarships are available to graduates of high schools within Indiana County. This fund is administered by the J. M. Uhler Scholastic Committee of the Indiana Kiwanis Club.

CORRINE MENK WAHR SCHOLARSHIPS. Through the generosity of Corrine Menk Wahr, Class of 1916, approximately fifteen scholarships are awarded each year to worthy students at the University. The amounts range from $50 to $325, payable in the designated amount for each of four years. Policy governing this scholarship fund is established by the Board of Trustees and administered by a committee appointed by the President of the University.

Nine Wahr merit recognition scholarships of $50 each are given each year to students at the University for excellence in certain fields, as follows: the student who

excels in athletics; the student who contributes the most to campus welfare; the student who does the most to promote the fine arts; the student showing the most initiative in bringing new ideas or action to the Indiana campus; the student evidencing the most professional promise as a teacher; the student with the highest scholarship during the first 3 years of University life; the student who writes most effectively; and the graduate student with the most commendable record.

THE NORAH E. ZINK FOOTBALL AWARD. Dr. Norah E. Zink, a retired professor of the Geography Department of Indiana University of Pennsylvania, has established an annual award of $25 for that member of the varsity football team whose academic average shows the greatest improvement over the fall semester.

THE NBEA AWARD. Upon the recommendation of the students and faculty, the National Business Education Association presents an annual award to the outstanding senior in Business Education. The award consists of a membership in NBEA, a copy of the NBEA Yearbook, and a one-year subscription to the monthly *FORUM* and to the *National Business Education Quarterly*.

Loans

Loans are provided to those who may not qualify for a scholarship or to supplement scholarship or employment grants. Interest rates range from 0 to 7%, with no repayment necessary until after graduation for most of the loans. A student is eligible to borrow up to $1,000.00 in any academic year. National Defense Student Loans are available to freshmen as well as to upperclassmen and graduate students. A listing follows:

JENNIE E. ACKERMAN LOAN FUND. By action of the Executive Committee of the Indiana University of Pennsylvania Alumni Association, the Jennie E. Ackerman Loan Fund was established in 1962, by contributions from alumni and friends, in memory of Jennie E. Ackerman who served as Supervisor of Student Teachers at Indiana University of Pennsylvania for many years. Loans are available to sophomores, juniors, and seniors who are maintaining satisfactory academic records at the University. The maximum outstanding amount extended to any one student cannot exceed $200. Interest is at the rate of 2% payable at maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

ROBERT BELLIS SCHOLARSHIP LOAN FUND. A loan fund has been established at Indiana University of Pennsylvania by friends and relatives in memory of Robert G. Bellis, a graduate of Indiana State College, to grant loans to deserving students, preferably to juniors or seniors. Interest is at the rate of 2%, payable at maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

SUZANNE MARSHALL HARTMAN LOAN FUND. A loan fund has been established at Indiana University of Pennsylvania by family and friends in memory of Suzanne M. Hartman, a graduate of Indiana in Home Economics. This Fund is used to grant loans to deserving students in their sophomore, junior, and senior year.

Interest is at the rate of 2%, payable at maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

OLIVER W. HELMRICH MEMORIAL SCHOLARSHIP LOAN FUND. This fund has been established at Indiana University of Pennsylvania by the Helmrich family and friends in memory of Mr. Helmrich, a member of the Indiana Faculty at the time of his death.

In an effort to continue his desire to help young people in education, loans of up to $250.00 are available, according to need, to full-time seniors and graduate students enrolled in the School of Education.

Notes are interest-free for 1 year, and carry a 6% interest charge if repayment is extended.

JANE E. LEONARD MEMORIAL LOAN FUND. This loan fund has been built up largely through the work of the faculty and alumni of Indiana University of Pennsylvania, and now totals about $30,000. The governing board in charge of granting loans consists of a faculty committee appointed by the President of the University. The plan in operation provides for the granting of loans to sophomores, juniors, and seniors with interest at 2%, payable at maturity of the loan. In special cases of emergency a freshman may arrange for a short-term loan during his second semester in the University. The maximum outstanding loan to any student cannot exceed $400. Applications are available at the Office of the Director of Financial Aid.

Thirty-day loans not to exceed $20 are available to all students in cases of emergency. No interest is charged. These loans are available upon application to the Dean of Men, or Dean of Women.

MACK LOAN AND SCHOLARSHIP FUND. A loan and scholarship fund has been established by members of the Mack family to be used for making loan and scholarship grants to worthy students with financial need. Preference is given to freshmen and sophomores who can give evidence of academic excellence, financial need, and promise as a future member of the teaching profession. At the present time the maximum loan available is $200 per year. Interest is at the rate of 2%, payable at maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

DR. JOY E. MAHACHEK LOAN FUND. A loan fund in the name of Dr. Joy E. Mahachek, former Chairman of the Mathematics Department, has been established by the Alpha Sigma Alpha. Preference for this loan will be given to a sophomore with a minimum cumulative average of 2.0.

ALAN P. MEWHA GEOGRAPHY MEMORIAL LOAN FUND. This fund was established in 1959 and is administered by the faculty of the Geography Department. Juniors and Seniors have priority on loans from this fund. Interest rates are the same as those for the Jane Leonard Fund.

NATIONAL DEFENSE STUDENT LOAN PROGRAM. The National Defense Student Loan Program was authorized by the enactment of Public Law 85-864, the National Defense Education Act of 1958. The law requires that each borrower be a full-time undergraduate or graduate student, that he be in need of the amount of his loan to pursue his courses of study, and that he be, in the opinion of his institution, capable of maintaining good standing in his chosen courses of study. A student may borrow for college expenses in one year a sum not exceeding $1,000, and during his entire course in higher education, a sum not exceeding $5,000. Applications are available at the office of the Director of Financial Aid.

RUSTY PREISENDEFER MEMORIAL LOAN FUND. This fund was established as a gift from Mrs. Suzanne Preisendefer Brickner in memory of her husband, who was killed in action in South Viet Nam. Preference in granting loans from this fund shall be given to members of the advanced ROTC and upperclassmen. Loans will be made up to a maximum of $400 per individual, with the first note carrying a 2% interest charge. Notes extended beyond that time will carry a 6% interest charge.

FLOSSIE WAGNER SANFORD STUDENT LOAN FUND. The Pennsylvania Federation of Women's Clubs has established a student loan fund in honor of Flossie Wagner Sanford, an alumna and former member of the faculty of Indiana State College. Loans from this fund are made by the Faculty Loan and Scholarship Committee to qualified students who need financial assistance. Interest is at the rate of 2%, payable at the maturity of the loan. Notes extended beyond that time will carry a 6% interest charge.

LAW ENFORCEMENT STUDENT LOAN PROGRAM. LEEP is a Federal assistance program designed to help improve the Nation's criminal justice system – police, courts and corrections – by enhancing the quality of the criminal justice personnel through opportunities for higher education.

Full-time students enrolled in a program leading to a degree or certificate in a program of study directly related to law enforcement may apply for this loan. A loan through this program can be granted up to $1,800. This loan will be cancelled at the rate of 25% per year of service in law enforcement. Otherwise, the loan carries 7% interest and must be repaid within 10 years or at a rate of $50 a month, whichever is the shorter time period.

The student may be enrolled on a full- or part-time basis in a graduate or undergraduate program in courses of study related to law enforcement or suitable for a person employed in law enforcement.

TAU KAPPA EPSILON LOAN FUND. Through the generosity of a former Tau Kappa Epsilon faculty adviser, a sum of money has been made available for loans to members in good standing academically and with the fraternity. The maximum outstanding amount to any one student cannot exceed $400.

MEN'S VARSITY "I" LOAN FUND. The Men's Varsity I Club has built up a loan fund for members of varsity athletic teams in good standing. Members may borrow not more than $150.00 per year. Loans are made for a reasonable period of time and are interest free for the first year. Thereafter the interest rate is 2% per annum.

Student Employment

Students are employed on a part-time basis in a number of departments on the campus. Positions are filled on the basis of financial need and the special abilities required in certain jobs. Students are assigned to such jobs as waiters in the dining room, typists, office clerks, library assistants, relief switchboard and elevator operators, and janitors. Students desiring employment should file an application in the Financial Aid Office. All assignments to student employment are made by this Office.

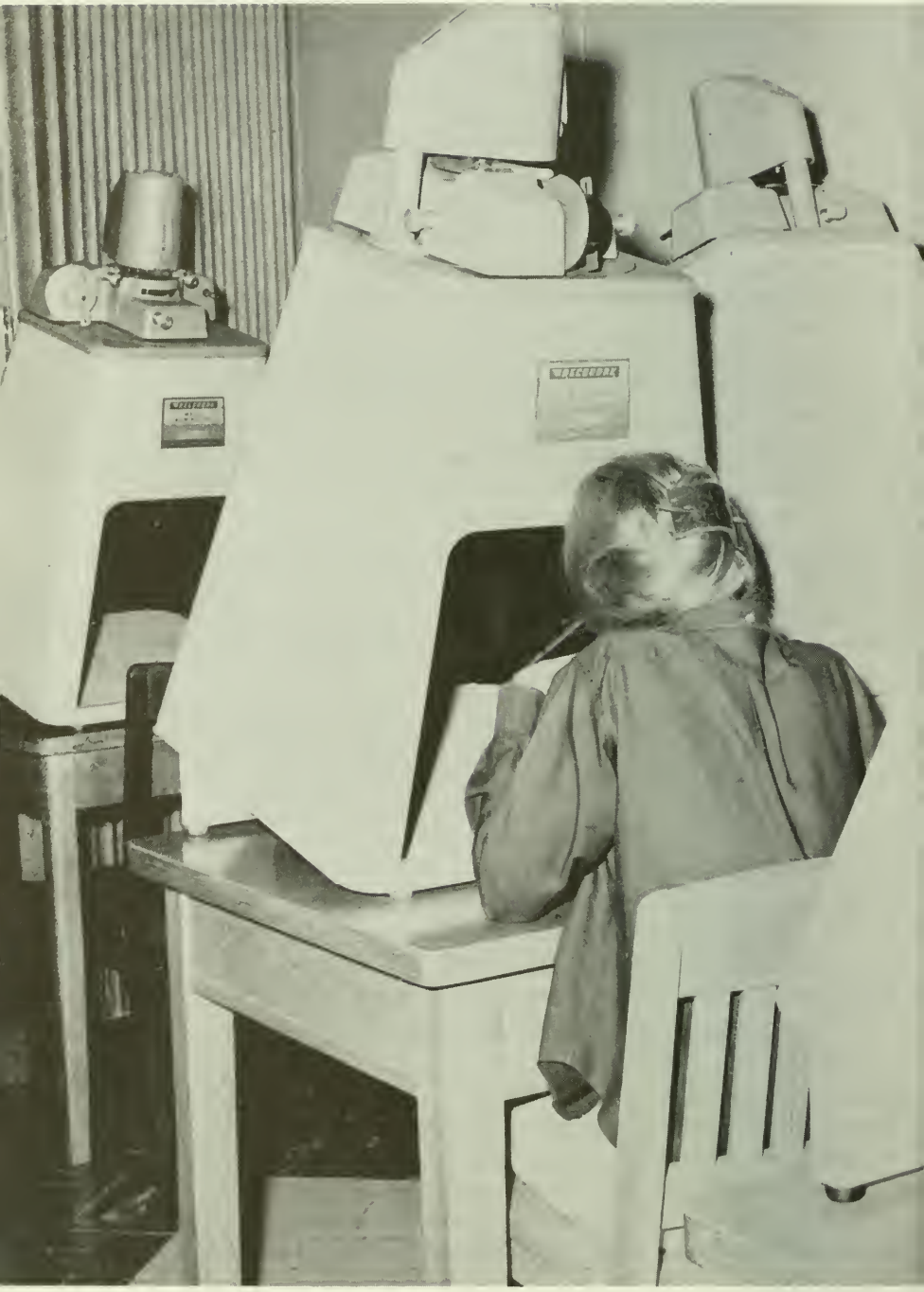
Applications for student employment are not accepted from students until they are actually on campus. To be kept on student employment rolls, the student must earn at least a 2.0 quality point average in his total academic program.

Student employment may be under either the regular University employment budget or the Work-Study Program under the Higher Education Act.

WORK-STUDY PROGRAM. This Program was initiated by the enactment of the Economic Opportunity Act of 1964. It is intended to stimulate and promote the part-time employment of students who are from low-income families. When the needs of all interested students from these income levels have been met, any remaining funds may be used to provide employment for other students who have demonstrated financial need. The minimum hourly rate of pay is $1.60 per hour, and employment is for 15 hours per week.

Vocational Rehabilitation Assistance

Students who have substantial physical or mental handicaps may receive educational benefits through the Bureau of Vocational Rehabilitation Assistance. In order to be eligible, students must satisfy the physical and financial requirements of the Agency. For further information regarding this assistance, the student should contact his local Bureau of Vocational Rehabilitation Assistance office or representative.



ACADEMIC POLICIES

CLASSIFICATION OF STUDENTS

The FULL-TIME undergraduate student is defined as a student who is enrolled in courses carrying 12 or more hours of credit in a Fall or Spring semester. Any student carrying less than 12 semester hours in a semester is a PART-TIME STUDENT. All part-time students wishing full-time status must apply for and obtain approval of such a change.

All undergraduate summer students are considered to be part-time for the duration of the summer session; this status is technical, however, and does not jeopardize *per se* the student's normal full-time status for Fall or Spring semesters if such status is held for those semesters.

For purposes of designating students by class, the following credit hour classification ranges are used:

Freshmen ..... 28 semester hours or less
Sophomores ..... 29-56 semester hours
Juniors ..... 57-90 semester hours
Seniors ..... 91 semester hours or more

Class designations are based on credits EARNED, rather than credits ATTEMPTED.

Persons holding a degree and working for a second baccalaureate degree may be classified as seniors.

GRADES AND QUALITY POINTS

GRADING SYSTEM. The following grades are used in reporting the standing of students at the end of each semester or summer term: A, excellent; B, good; C, average; D, passed; F, failed; I, incomplete; P, pass/fail

(option). Regarding the option of pass/fail courses, if a student fails the course, he will be awarded an F and the terms of "failing" a course will prevail.

The grade of I is used to record work which, so far as covered, is of PASSING GRADE, but is incomplete because of PERSONAL ILLNESS or other UNAVOIDABLE REASON. It must be made up within 2 months after the student returns to the University. The grade of W is used to designate that the student has voluntarily withdrawn from a course within a specified period after the beginning of any regular semester. The W grade carries no credits or quality points for the course in which it is reported, but does appear on the student's record.

QUALITY POINTS. Quality points are assigned as follows: Grade A, 4 quality points per semester hour; B, 3 quality points per semester hour; C, 2 quality points per semester hour; D, 1 quality point per semester hour; F, no quality points.

Quality points are not counted on grades from other schools, and a student transferring from another school is held responsible for quality points only on work taken in this University.

The CUMULATIVE QUALITY POINT AVERAGE is determined by multiplying the credit hours per course by the grade in quality points received for that course, repeating this procedure for each course attempted, totaling the credit hour-quality points thus obtained, and dividing by the total number of credit hours attempted.

GRADE REPORTS. About a week after each semester or summer session, a full grade report is mailed to each student at his home address. Parents do not receive reports, as it is assumed that University students are sufficiently mature and trustworthy to report the facts to their parents.

DEAN'S LIST. To be eligible for the Dean's List, which is compiled after each semester, a student must have a cumulative point average of 3.20, 14 or more semester hours attempted, and no D's or F's in the preceding semester or summer session of work. This list will also include students doing their "Student Teaching" who meet the above requirements.

CRITERIA GOVERNING CONTINUANCE AT THE UNIVERSITY

Academic Good Standing

To be in good academic standing, an undergraduate student must maintain a 2.0 cumulative quality point average.

Freshmen entering the University any time after June 1, 1971 must have attained a 1.8 cumulative quality point average upon the completion of their first full-time academic year to remain at the University. A cumulative quality point average of 2.0 is required for an undergraduate's remaining years. To achieve the stipulated average, the Pre- and Main Summer Sessions immediately following the year's Spring semester may be used. Students who fail to be in good academic standing at the end of any summer's Main Session will be dismissed from the University for at least one academic year.

Freshmen who entered the University from the summer of 1966 through the spring of 1971 must have attained a cumulative quality point average of 1.6 by the end of the Main Summer Session following the first academic year to be in good standing. Sophomores of that enrollment era are given until the end of the Main Summer Session following their second academic year to attain a 2.0 cumulative quality point average. Juniors and Seniors of that enrollment era must have achieved a cumulative 2.0 quality point average by the end of the Main Summer Session following their third year and as a condition for graduation. Failure to meet these standards will result in dismissal from the University for at least one academic year.

All courses taken at Indiana University of Pennsylvania become a part of the student's permanent academic record. The record shall show hours attempted, hours earned, and quality points earned.

The academic standing of all students is computed on the basis of courses attempted at this University only. Credit is granted for work completed in other institutions in accordance with the stipulations set forth under "Admission and Registration."

READMISSION AFTER ACADEMIC DISMISSAL. Students who have been dismissed from the University for

academic reasons and who desire to return after the dismissal interval must file a formal application for readmission with the Dean of the School in which they were enrolled at the time of their dismissal. Filing must be before April 1, if requesting readmission for the following summer sessions or for the Fall semester starting the following September. Filing must be before November 1, if requesting readmission for the following Spring semester.

Academic Violations

The following policies pertain to the processing of academic violations:

Minor Violations.

a) Cheating by those who give aid as well as receive aid in course and laboratory, except in a final examination. SANCTION: "F" in the course.

b) Evasion of University academic policies and procedures. MAXIMUM SANCTION: "W" in the course.

Major Violations. Those violations that may warrant action beyond receiving an "F" in the course:

a) Cheating on a final course or laboratory examination.

b) A second cheating violation.

c) Possessing an examination without the teacher's authority or prior knowledge.

d) Plagiarizing in any way.

e) Defacing library books or educational instruments or materials.

f) Purposeful evasion of University policies and procedures.

MAXIMUM SANCTION: expulsion.

MINOR VIOLATIONS PROCEDURE. A teacher may fail any student for cheating in his course. (The teacher should inform the student and file a report of the violation with the Academic Discipline Subcommittee of the Senate Academic Procedures Committee, and the Vice President of Student Affairs, making the violation a matter of record in the Subcommittee's files.) The student may request a hearing (an opportunity to be heard) wherein the student and the teacher involved are heard by the Chairman of the teacher's Department. The heaviest sanction which can be imposed by the Chairman is to uphold the "F" grade. The

student may appeal the Chairman's ruling to the Academic Discipline Subcommittee of the University Senate's Academic Procedures Committee, with officially designated observers given full voting rights and excluding the Academic Vice-President and the Dean of the School in which the violation occurred. The Academic Discipline Subcommittee is chaired by a student elected by the membership.

The Academic Discipline Subcommittee may accept the report and decision of the Department Chairman, reverse his decision and return the case to him for further hearings in keeping with suggestions that the Subcommittee may make, or reverse his decision and dismiss the case. It may also accept the decision of the Chairman, but reduce the sanction imposed. It may NOT increase the sanction. Returning the case to the Chairman is not DOUBLE JEOPARDY, since the first hearing is still not complete.

If the Academic Discipline Subcommittee accepts the report of the Department Chairman (whether it lowers the sanction or not), the matter is deemed final; except that either party may petition the Chairman to reopen the matter upon the discovery of new evidence. The Chairman will judge the sufficiency of the new evidence, and no appeal can be taken from his decision.

MAJOR VIOLATIONS PROCEDURE. A major violation is handled similar to a minor violation (in that the teacher should inform the student, and file a report of the violation with the Academic Discipline Subcommittee of the Senate Academic Procedures Committee, and the Dean of Students, making the violation a matter of record in the Subcommittee's files), but it proceeds to a hearing directly by the Academic Discipline Subcommittee of the Senate Academic Procedures Committee, whose composition is as previously described. The hearing will follow the standards of procedure, where the accused should:

1) Receive ten (10) days written notice of the charges against him, and the sanctions which may be applied if the charges are proven;

2) Receive written notice of the date, time and place of the hearing (this should accompany the charges);

3) Be advised of the names of the witnesses who will appear against him and the substance of their testimony;

4) Have the right to present a defense and witnesses in his own behalf, and the right to cross-examine witnesses

against him (the prosecutor, naturally, has the same right to cross-examine defense witnesses); and

5) Have access to a transcript of the proceedings and the findings of the board.

The accused may be assisted by an advisor of his choice, but legal counsel cannot be used on either side of a student-institutional hearing. The hearing may be governed by its own rules as to internal proceedings along lines of "fundamental fairness." The sanction imposed by this hearing board may be appealed to an appeal board consisting of the Vice-President, the Dean of the School in which the violation occurred, the Vice Chairman of the Faculty Senate and the President of Student Government. The appeal is governed by the principles previously outlined.

Disciplinary Dismissal Or Suspension

Suspension or dismissals for disciplinary reasons are recommended to the President of the University by the Dean of Students upon the recommendation of the University Judicial Board. The Board is composed of the Dean of Students, five faculty members, and five student members.

ACADEMIC HONORS

Students with appropriate academic records may be graduated with one of the following distinctions:

Summa cum laude
3.75—4.00 cumulative quality point average

Magna cum laude
3.50—3.74 cumulative quality point average

Cum laude
3.25—3.49 cumulative quality point average

CLASS ATTENDANCE

Class attendance and class participation beyond mere physical presence are essential for maximum educational advantage and are strongly encouraged. Responsibility for all course material rests entirely with the student, whether or not he attends each class. Under no circumstances shall class attendance, *per se,* be used as a basis for awarding or altering a grade in a course; this applies to freshman through senior class levels. Course grade will be based on

such factors as class preparation, class participation, skill development, effectiveness of oral presentations and/or written reports, quiz grades, and test and final examination scores. It is the prerogative of the instructor to administer unannounced quizzes as part of the student evaluation process, and to pass judgment on the merits of all cases involving late class submissions and class requirements missed by the students.

All students may be required to attend class at the opening of the semester in order to stabilize enrollments and class rosters.

NORMAL SEMESTER HOUR LOADS

A normal semester hour load is 15-17 academic hours. A student who wishes to schedule more than 17 semester hours must obtain approval from the Dean of the School in which he is registered; approval will be predicated upon the student's demonstrated competences.

PASS-FAIL POLICY

A student may take courses on a pass-fail basis to a total of 15 semester hours throughout his University career. The student is limited to one pass-fail course in any given semester during his sophomore, junior, and senior years. All courses in the student's General Education program and in his major and minor fields are excluded from this prerogative.

The student may declare his intent to choose pass-fail in a specific course no later than the end of the semester's discrete course withdrawal period. Instructors will NOT be notified of the identity of pass-fail students in their courses; identification will be handled by the Computer Center through an appropriate coded control.

A student shall be given academic credit WITHOUT QUALITY POINTS for a course he has taken pass-fail if he receives a passing mark in the course. The semester hours successfully completed under pass-fail ("passed"), within the overall 15 semester hour limitation, shall be deducted from the graduation requirement of 124 hours minimum and for calculation of the quality point average required for graduation. However, if a student fails a pass/fail course he will receive the "F" grade, and the corresponding quality points will be reflected in the computation of his quality point average.

The summer sessions, collectively or in any combination, shall be considered a unit similar to a Spring or Fall semester for pass-fail purposes. Hence, a student is permitted to take only one course during the summer on a pass-fail basis.

The purpose of pass-fail is to permit a student to take an elective course in a field of his personal interest where he may be competing with major students in the Department in which the course is offered. When scheduled, such a course shall be included in the student's normal course load for the semester.

CHANGES OF CURRICULUM

A student must indicate his desire to change to a new curriculum in the office of the Dean of the School in which the student is registered if the curriculum change desired is from one Department to another within the same School (for example, change from a Mathematics major to a Political Science major) or in the office of the Dean of the School to which the student wishes to transfer, if the curriculum change is from one School to another (for example, Secondary Education major to Biology major). In either case, the student will complete an application form that is available in the Dean's office. Before seeking a curriculum change, it is advisable that the student consult with the Chairmen of both his old and his "new" Departments.

When a student changes Schools, the Dean of the School (or his agent) into which the transfer is sought will evaluate the student's credits before approving the transfer. A copy of the evaluation will be made available to the student and his new adviser if a change in curriculum is effected.

In cases involving Veteran students, the Dean of the School into which transfer is sought (or his agent) shall give the Veteran a statement of prospective approval and the effective date of the proposed changes. This statement shall also indicate the amount of extended training time the change of curriculum will entail and the amount of credit loss, if any. The Veteran shall take this statement to the Veteran's counselor at least 1 month prior to the effective date of the change. No transfer of curriculum shall be made by Veterans until VA approval has been assured.

DISCRETE COURSE WITHDRAWAL POLICY

During the Fall and Spring semesters, students are permitted to withdraw from a course with a grade of "W" within the first 6 weeks of the semester. Faculty are required to inform students of their standing in class prior to the end of this 6-week period.

Upon the close of the described 6-week withdrawal period, a student may withdraw from a course only with the approval of his adviser, Department Chairman, and School Dean (in that order), for such reasons as illness, accident, or extreme personal problems. Such withdrawal may occur no later than 1 week before the beginning of final examinations.

For all discrete course withdrawals, the student must complete a course withdrawal form, available in Department offices. This form must be signed by both the student and the instructor.

If a student fails to complete the requirements for a course but has not formally processed a withdrawal as described above, and if the instructor does not receive a notice of withdrawal from the University, the instructor shall note in his course records the student's last attendance date and/or other student activity and assign an "F" for the course.

Discrete course withdrawals from summer session classes are subject to the regulations prescribed by the Director of Summer Sessions yearly.

WITHDRAWALS FROM THE UNIVERSITY

An undergraduate student who does not pre-register for the succeeding semester or, having pre-registered, does not appear for registration at the beginning of the succeeding semester, is considered to have withdrawn from the University. Thereafter he must apply for readmission as prescribed under "Admission and Registration."

Any undergraduate student withdrawing from the University during a semester or a summer session must secure an official Withdrawal Form from the office of the Vice President of Student Affairs, the Dean of Men, or the Dean of Women. The student will clear with the appropriate offices listed on the form, securing their signatures as evidence of clearance. The Withdrawal Form will be

returned to the Office of the Vice President of Student Affairs, which will notify the appropriate School Dean of withdrawals approved, and official notification of withdrawal from specific classes will be sent to each instructor by the School Dean. No person shall be considered withdrawn from the University within a semester or summer session unless such notice is received.

ADVISORY PROGRAM

A group of selected faculty members act as freshman advisors for entering freshmen in their departments. In some curricula the advisors continue with the same group of advisees from year to year. In other curricula the freshman advisors remain with their advisee group only for the student's first year; under this program, the student is then assigned an academic advisor for the remaining years through to his degree in his chosen field.

Faculty advisors counsel the students on academic achievement, dropping courses, changing curriculum, student activities, study schedules, and personal problems. The advisor receives a photostat copy of the student's permanent record at the beginning of the academic year, a copy of "D's" and "F's" at mid-term, copies of all letters pertaining to academic achievement sent to the student's home, and a copy of the report of the student's application for Junior standing.

SOPHOMORE SCREENING FOR JUNIOR STATUS APPROVAL

General Policy at Indiana University of Pennsylvania permits each School to determine its own scheme for evaluating the development and progress of its major students. However, each School is expected to employ some effective procedure for such evaluation.

Several of the Schools use a procedure called "Sophomore Screening for Junior Status Approval," with the following required:

All students (in such a School) enrolled in their fourth semester or who will complete 57 semester hours ATTEMPTED by the end of the current semester must apply for Junior Status Approval by filling out an application form by the deadline date designated and announced.

All students should check with their faculty advisors to determine which Schools use "Junior Status" screening procedure and the criteria for Junior Status Approval.

HEALTH AND PHYSICAL EDUCATION SPECIAL REGULATIONS

Credits in Health and Physical Education are required of undergraduate women students in the General Education segment of the University curriculum and are part of an option for men students in that segment. The University requirement in physical education may be altered after consultation with the Department Chairmen in Health and Physical Education for Women and Men, who will act upon the recommendation of the University physician and the Dean, School of Health Services. Physically incapacitated students must obtain a medical waiver from or through the University physician. This procedure should be repeated each semester except in cases of permanent disability. The waiver form should be filed with the Chairman of the Health and Physical Education Department involved. Such students may elect to participate in specially arranged adaptive physical education courses or defer the University requirement until such time as the disability dissolves. These regulations do not refer to temporary illness of short duration; such cases are managed by the individual instructor.

RESERVE OFFICERS TRAINING CORPS

The United States Army has a unit of the Reserve Officers Training Corps at the University. In fulfilling the University's General Education requirement, men students have the option of taking Military Science (Reserve Officers Training Corps) for 2 credit hours for two semesters OR of taking a combination of Health for 2 credit hours and Physical Education for two semesters of 1 credit for each semester. The ROTC option can be completed in two semesters, whereas the Health and Physical Education option is not usually completed in less than three semesters. The ROTC option offers the student a 1-D Selective Service Classification for the period of participation. Completion of the 4-credit ROTC option has no effect on future Selective Service classifications, nor does it in any way obligate the student for later military service.

Upon graduation from the regular University course and successful completion of the Advanced Course ROTC Program, the student will receive a Second Lieutenant's commission in the U. S. Army Reserve. To make this program possible, deferments from the draft are issued to students successfully meeting the University and ROTC requirements. Upon graduation, the former student serves on active duty for a period not to exceed 2 years, if called by the Secretary of the Army. This enables the student to obtain his University degree and then fulfill his obligation to his country.

Under special conditions, deferments to obtain advanced degrees are granted by the Army to ROTC students who wish to do graduate work prior to going on active duty. Additional information on this subject can be obtained at Pierce Hall.

UNIVERSITY SENATE

Purpose

The purpose of the University Senate is to provide a formal means through which the student body, faculty and the administration, working as a unified group, shall share in the governance of the University through the establishment of University policy.

Nothing relating to the organization and administration of the University Senate shall be construed so as to limit the authority of the Board of Trustees or the President of the University with respect to the administration of the University as prescribed by law.

Composition and Elective Procedures

The University Senate shall consist of a number of faculty double the number of departments of the University, an administrative segment one-third the size of the faculty segment, and a student segment one-half the size of the faculty segment. Faculty and administrative members must hold full-time contracts at the time of election or appointment, and students must be full-time and in good standing.

"Student" refers to both the undergraduate and graduate student bodies. The student segment shall consist of ten times as many undergraduate students as graduate students, each delegation to be elected by its represent-

ative student body. Undergraduate students shall be elected under the auspices of the Student Government Association, and graduate students through elections arranged by their comparable body. In both cases, the officiating body shall call for and accept such voluntary nominations for election to the Senate as shall be made to it.

Student members of the University Senate serve on most of the Senate Committees.

COURSE NUMBERS AND ABBREVIATIONS

COURSE NUMBERS. Courses for Freshmen are numbered in the 100's, for the sophomores in the 200's, for juniors in the 300's, and for seniors in the 400's.

Required courses are numbered from 1 to 50 and elective courses are numbered from 51 to 100, within each 100.

DEPARTMENTAL COURSE ABBREVIATIONS. The following departmental abbreviations are used to identify courses referred to in the Undergraduate Catalog:

Anth – Anthropology
Art – Art
Biol – Biology
BE – Business Education
Bus – School of Business
BM – Business Management
Chem – Chemistry
Crmn – Criminology
CS – Consumer Service
CSci – Computer Science
DE – Distributive Education
Econ – Economics
Ed – Education
EdPsy – Educational Psychology
El – Elementary
Eng – English
FdEd – Foundations of Education
Fr – French
FN – Food and Nutrition
Geog – Geography
Geos – Geoscience
Ger – German
Grk – Greek
HEEd – Home Economics
Hist – History
HPE – Health & Physical Education
IS – International Studies
Lat – Latin
LRes – Learning Resources
Math – Mathematics
MS – Military Science
Mus – Music
Nurs – Nursing
Phil – Philosophy
Phys – Physics
PolS – Political Science
Psy – Psychology
PSN – Public School Nursing
Rus – Russian
SafS – Safety Sciences
Sci – Science
Soc – Sociology
Sp – Spanish
SpE – Education for Mentally Retarded
SpH – Speech Pathology and Audiology
SpR – Rehabilitation Education
SS – Social Studies

STUDENTS' ACADEMIC GRIEVANCES

If a student feels that he has been treated unfairly by any instructor (this will refer principally to grading policy, but very occasionally may include genuine disagreement in class participation), he must try to resolve the problem first with the Chairman of the Department in question. If the student is not satisfied with the solution offered by the Department Chairman, he should confer with the Dean of the School in which he is enrolled.

STUDENT LIFE AND SERVICES

The student personnel staff of the University provides those services to students that will support the best learning climate possible. It is the purpose of the Student Personnel Program to guide the student toward optimum personal development. Beginning with the Freshman Week Orientation Program, the student is invited to participate in the activities and the residence life of the University. An attempt is made to provide the student with a maximum of self-regulation during his years as a citizen of the University community. The student personnel staff, together with student groups and other faculty members, endeavors to create a rich environment which will extend the classroom experience and will involve students in making meaningful decisions.

FRESHMAN ORIENTATION

At the beginning of the Fall term preceding registration, an orientation program is conducted for all new incoming undergraduates. Professional personnel and carefully selected and trained upperclassmen introduce new students to the academic and social realities of the campus. Emphasis is placed on academic advisement and program planning. Every attempt is made to fit the new student into the day to day operation of the school as quickly and as smoothly as possible. The orientation program is traditionally balanced with academic and social activities to give the new student a realistic introduction to college life. Topics relevant to students and their new environment are approached through group discussions, movies, plays and speakers.

HOUSING

General Policy

Housing available to students includes:

1. University-owned residence halls.
2. Privately-owned residence halls adjacent to the campus.
3. Fraternity houses.
4. Privately operated off-campus housing, and
5. Accommodations at home or with relatives.

The University is committed to the policy of non-discrimination on the basis of race, color, religion, creed, national origin or ancestry. All facilities listed with the Housing Office must adhere to this commitment. It is the student's responsibility to initiate and to follow through the procedures necessary to secure the housing he desires. All students must register housing intentions with the Director of Housing prior to registration. All students living off campus are required to complete an off-campus register card and submit it to the proper Student Affairs offices in Pratt Hall. Residence privileges are available only to full-time, registered undergraduate students at the University.

Residence Halls

There are numerous modern newly-constructed residence halls on the University campus. These residences are for men and women and house both freshmen and upperclassmen. Students' rooms have individual beds, desks, and drawer space. Closet space is also provided in each room. Rooms are furnished with bed linens and drapes. Students receive one pillow case and two clean sheets at the beginning of their occupancy and are provided with one laundered pillow case and one laundered sheet each week thereafter. Each student must supply blankets, towels, soap, toilet articles, etc.

The University requires that all new students, particularly freshmen, live in residence halls unless they are commuting from home. Efforts are made to aid the student in his orientation to college, to make him aware of the many educational opportunities offered within the college community, and to provide a variety of contacts with other students and with faculty. The policy of the University is to encourage the development of positive

social behavior and good study habits rather than to exercise close supervision of the individual. Each student should begin his residence life at the University with a well-defined personal recognition of his responsibilities to protect the dignity, rights, and feelings of his fellow students. In residence hall living, students are considered to be adults and are completely responsible for their own behavior. The faculty and administration delegate within the confines of federal, state and local laws, much of the governing authority to Student Government. All students living in the residence halls are members of the hall government and are able to establish their own governing policies and programs to a considerable degree. It is up to each student to assume his share of this obligation by sincere interest and participation in hall government. Professional staff aids the student in facing responsibilities and solving problems resulting from these obligations. Certain upperclassmen also are selected and trained to aid students and serve as resident assistants in all residence halls.

New students will be admitted to the residence hall on the day prior to the beginning of their orientation program. Food service will be available not later than the evening meal prior to their registration date. Students are not permitted to occupy their rooms earlier than the established date for their arrival on campus. All housing and food service charges must be paid to the Accounts Receivable Office in Clark Hall before residents will be issued a room key and/or meal validation. Students living in private residence halls will receive separate housing charges from the owner.

Application for Housing

Incoming freshmen and transfer students receive an Application for Housing from the Admissions Office when they are notified of acceptance from the University. Both must submit a $50 advance housing fee. Students already at the University must bring their application along with a $50 advance payment to pre-registration. Payment is by personal check or money order payable to the Indiana University of Pennsylvania. Advance payment is credited against total housing charges. One-half of the advance payment will be refunded if the Housing Office, John Sutton Hall, is notified of cancellation no later than June 1

for the Fall semester. Students who are enrolled at the Indiana University of Pennsylvania but have not cancelled their University housing as of that date, will forfeit the full advance deposit fee if they cancel out their enrollment.

Dining Room Policy

All students residing in one of the University residence halls are required to take their meals in one of the University dining halls unless specifically excused by the appropriate student affairs office. Junior and senior students residing in privately owned but University controlled residence halls have the option of taking their meals on campus or eating off campus. Such students who wish to take their meals off campus must indicate such arrangements to the Director of Housing by pre-registration. Non-resident students may arrange to take their meals in one of the dining halls through the Director of Housing. All such arrangements are on a semester basis. Guests may take meals in any of the dining rooms at the current transient rate.

Insurance for Personal Belongings

The Residence Hall Association of the University offers students the option of purchasing an individual insurance policy covering loss or theft of money or property while residing in a residence hall. The insurance is very inexpensive and is recommended for purchase by all students. Complete details will be made available to all students upon arrival on campus.

AUTOMOBILES

Every student and every faculty or staff member who drives an automobile on the University campus must register each year with the Director of Housing and have a parking sticker displayed on the left side of the rear bumper. Parking violations are checked daily. Drivers may be fined for illegal parking. These regulations also apply to motor bikes and scooters. Students living in University residence halls are not permitted to keep cars in Indiana unless special permission is given them by the Director of Housing.

FACILITIES FOR COMMUTING STUDENTS

Accommodations for women commuting students are provided in John Sutton Hall. Commuting men students may obtain lockers in the basement of Whitmyre Hall by applying at the Office of the Dean of Men. Library facilities provide pleasant study conditions for commuter students and several other lounges scattered across the campus are always available for commuter student use. Commuter mail is held at the University Post Office window and mail boxes are available for commuter students upon request. Commuter students may purchase lunches in the Foster Dining Hall, the Folger Dining Hall, the Foster Dining Hall Coffee Shop, or the Student Union Coffee Shop. In addition, several private eating establishments are in close proximity to the University campus.

STUDENT PERSONNEL SERVICES

UNIVERSITY INFORMATION OFFICES

The University Information Office was established in August, 1970, to serve as an information center and communication link for areas of student concern. Similar to a campus ombudsman, it is designed to permit the same advantages through an existing office on campus. Its goal is to serve students in areas of concern, sometimes by referral to appropriate offices, and sometimes reduce frustration by having someone available as an avenue to discuss or initiate action. The Information Office's underlying theme is to combat problems of bureaucracy and to create an awareness of the individual on the part of the University. The four basic concepts that the office functions under entail investigation, recommendation, general information, and encouragement. Students are invited to use the office, Pratt 204, for any area of concern. Though not always able to give direct answers or correct situations, The Info Man does have capabilities of finding an answer or of attracting the attention of appropriate segments on campus.

HEALTH SERVICES

Pechan Health Center is a new, completely equipped infirmary located on the corner of Pratt Drive and Maple Street. This two-story structure is thoroughly equipped for all routine work. Registered nurses are on

duty 24 hours a day, 7 days a week. Medical service is provided by four full-time University physicians. Twenty-seven beds are available where resident students may have three days of free hospitalization. A fee of $1.00 is charged for each day after that. Commuting students are given free dispensary service and may be admitted to the Infirmary for emergency hospitalization for which a fee of $3.00 per day from the first day is charged. Free dispensary service is available to students in the Campus Demonstration School. The Pechan Health Center service does not include antibiotics, and other special drugs – these must be purchased by students. Serious illnesses and accidents are transferred to the local hospital or to hospitals in the students' home town.

SPECIAL CLINICS

Three clinics at the University offer diagnostic testing and remedial or improvement service or instruction in the following areas:

PSYCHOLOGICAL CLINIC – diagnosis of academic and behavior problems and personal, vocational, and educational counseling.

READING CLINIC – diagnosis and remedial instruction for reading and spelling disabilities and instruction for the improvement of present skills.

SPEECH AND HEARING CLINIC – diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy.

These services are made available without charge to students regularly enrolled at the University in order that they may be given the assistance necessary to remove deficiencies which would interfere with their successful performance and progress in the University and in their future work.

University students who need help in any of the areas suggested above are encouraged to use the facilities provided for them.

University students may of their own initiative come to any clinic for help, or they may be referred by any faculty member or University official.

INSURANCE

The Indiana University of Pennsylvania Board of Trustees instituted mandatory student accident and health insurance at the University effective September, 1963. It is realized, however, that some of the freshmen class students are covered by hospitalization policies of their parents. Where this is the case and additional coverage under the Indiana University of Pennsylvania student insurance plan is not desired, a waiver card can be submitted at the time of registration. The plan has been designed to protect all full-time students at the University. Full information concerning this insurance coverage is mailed to prospective students with their registration material.

CAREER SERVICES

Career services are available to students who are graduating, students who are enrolled to obtain teacher certification, students who have been accepted as candidates for degrees in the Graduate School, and alumni.

A complete set of credentials is prepared for each senior or graduate student who is interested. Alumni may use the services for position changes and up-dating their records. The Office of Career Services makes credentials available to prospective employers, arranges for campus interviews, provides occupational counseling service, prepares a current file of job opportunities, and maintains an extensive library of occupational information.

A computerized information retrieval system is available which permits graduates to make their qualifications known to companies throughout the nation. The Office of Career Services also receives and makes available to graduates and undergraduates information concerning summer employment.

Positions are not guaranteed by the University, but Indiana's record of placement is one of the very best in Pennsylvania.

SELECTIVE SERVICE AND VETERANS COUNSELOR

An Assistant Dean of Men serves as the Selective Service Counselor and submits all required reports to Selective Service boards for undergraduate men. To secure a II-S classification, a student must complete the Selective Service Information card at registration.

VETERANS. An individual who served with the Armed Forces for more than 180 days after January 31, 1955, is eligible for the Cold War G.I. Bill (PL 89-358), providing he meets certain other requirements. A prospective student should contact the Veterans Administration and submit to them the Veteran's Application for Program of Education.

Individuals eligible for the Cold War G.I. Bill must report to the office of the Veterans Counselor, on each day of registration for a semester or for summer sessions, to be entered or continued in training for Veterans Administration benefits purposes.

No veteran shall be permitted to change curriculum without clearance from the Veterans Counselor. Arrangements should be made at least one month before the effective date of change, in order to obtain approval of the Veterans Administration (see "Changes of Curriculum").

Any undergraduate receiving benefits from the Veterans Administration must carry at least 12 credit hours during a regular semester in order to be considered a full-time student by the Veterans Administration. The minimum requirement for a graduate student is 8 credit hours.

VETERANS' CHILDREN. Children of a deceased veteran whose death was due to service-related causes may be eligible for educational assistance from the Federal Government under Public Law 634 (War Orphans' Educational Assistance Act). Immediately upon acceptance to Indiana, men and women who qualify for such assistance should contact the Veterans Administration to determine their eligibility. They should report to the Veterans Counselor before registering at the University if the Veterans Administration approves their training under Public Law 634.

MAIL

The University Post Office is located in the west wing of Foster Dining Hall, at the corner of Eleventh and Grant Streets. The mail is delivered to offices and residence halls from this location. As it is a branch of the Indiana Post Office, the University Post Office provides most postal facilities, including boxes for commuter students.

RULES AND REGULATIONS CONCERNING STUDENT BEHAVIOR

The University has committed itself through a formal vote of the Indiana University of Pennsylvania Faculty Senate to the joint statement on Student Rights and Freedoms as the approved guideline for all student rules, regulations, and procedures at the Indiana University of Pennsylvania. The purpose of these general regulations are to spell out some of the actions that place the community in jeopardy and may therefore result in a student's suspension or expulsion from the University. In general, these regulations are concerned with conduct on campus but students must recognize that the University exists within a larger community which has its own laws and standards of behavior, and that membership in the University community confers no exemption from those laws and standards. Whether on or off campus, the student is under the jurisdiction of the city, state, and national governments. Off-campus misconduct will not normally be the basis for disciplinary action by the University; however, when such conduct imperils the integrity and values of the academic community, these actions may also result in disciplinary action on campus.

OFFENSES SUBJECT TO DISCIPLINARY ACTION

The following offenses have historically been and are now subject to disciplinary action by the University:

Cheating

Cheating on examinations, plagiarism, and improper acknowledgement of sources and essays and the use of a single essay in more than one course without the permission of the instructor. These violations include laboratory reports as well as all written papers submitted by the student for teacher evaluation in any course.

Coercion and Disruption

Physical restriction, coercion, or intimidation of any member of the University community. Participation in or encouragement of any effort to disrupt a class or other University function or seize or occupy any University building or part thereof.

Mass Disturbances

Participation in or attendance at riots or mass disturbances by students on the city streets or in any areas of the campus.

Defiance of Authority

Defiance or belligerence toward any University staff member, instructional or non-instructional, any University officer or any student in a supervisory capacity. Students are expected to carry University identification cards at all times and must identify themselves to University officials upon request. It is also understood that University officials or security officers should identify themselves before making such requests.

Weapons and Explosives

The possession, storage, or use of explosives, incendiary materials or weapons in University property is absolutely prohibited. Firearms and ammunition for sporting purposes must be registered and deposited with the Dean of Men's office. Any device which in any way propels a potentially dangerous projectile falls under this category.

Alcohol and Drugs

Improper use, storage, possession or distribution of drugs, such as narcotics, hallucinogenics, stimulants, depressants, and alcohol and any misconduct relating to such drugs.

Theft and Willful Property Damage

Vandalism, on or off campus, when committed by students concerns the University. Tampering with fire preventive apparatus is also willful property damage.

Perjury

The perjury or falsification of University documents.

Gambling

Gambling of any kind is prohibited.

The above offenses are considered serious and are subject to disciplinary action by the University through its various student and faculty judicial boards.

SERVICE FACILITIES

STUDENT UNION

The Student Union, built by the students through their Activity Fee, offers many facilities for the University family. Students may relax or watch television in the lounge, buy a snack or a complete meal at the coffee shop, listen to their choice of records in the music center, or play cards, billiards, or table tennis.

The Student Union Board and the Union Director and Program Director plan an active program of lectures, dances, movies, receptions, exhibits, and other events throughout the year.

BOOKSTORE

The Co-op Bookstore is located near the Student Union Building. The store stocks a complete line of all needed textbooks, supplies, paper-back books and other requirements for class use. In addition, the shopper will find an extensive selection of records, college wear, stationery, jewelry, sundries and souvenir items.

The store is operated on a competitive retail basis, with all profits from operations reverting to the Student Cooperative Association for use in supporting student activities.

UNIVERSITY LODGE

The University Lodge plays an important part in the recreational and instructional life of the University. Owned by students and faculty, this 280 acres of wooded hillside, with its rustic lodge, three picnic shelters, rope ski tow, toboggan run, and nature and hiking trails, not only offers opportunities for classes to study nature and conservation but also is in demand for picnics, meetings, and winter sports. The Lodge itself will accommodate groups of 300 to 400 students.

The Student Cooperative Association is currently planning a major expansion of facilities of the University Lodge. Such plans will include expanded skiing facilities, additional picnic areas, and an eventual complex of buildings for recreational use.

Any student or faculty member is welcome to use the Lodge property, but must be ready to identify himself by presenting an "I" card at the request of the caretaker.

During the winter sports season, ski equipment, sleds, and toboggans may be checked out for use.

STUDENT ORGANIZATIONS AND ACTIVITIES

Opportunity is afforded for participation in many and varied extra-curricular activities. In the main, these activities are student-initiated and planned with faculty counsel. This policy results in the organization of new groups and occasionally the dissolution of others.

STUDENT GOVERNMENT ASSOCIATION

The Student Government Association is composed of student representatives from all areas of the University. The president and vice-president of the Student Government Association are chosen in a campus-wide election. Other members are elected by their own constituencies.

Student Government Association is active in making recommendations to the Administration for the improvement of student welfare and is also active in promoting the general welfare of the University and good community relationships. The Student Government Association provides an opportunity for discussion of student problems, brings the student body, faculty, and administration closer together through a frank understanding of mutual problems, and promotes the observance of policies that will lead to improvement of University campus life.

STUDENT PARTICIPATION IN UNIVERSITY SENATE. Students also are elected to the University Senate and have full voting rights, together with Faculty and Administrative members. Most of the Senate Committees include students. The Student Government Association thus plays an active participating role in the University Senate which is the governing body for the institution.

STUDENT COOPERATIVE ASSOCIATION

The Student Cooperative Association plays an extremely broad role in the extracurricular life of the University. All students and faculty members belong to the

Association. Almost all campus-wide activities outside of the instructional program are sponsored wholly or in part by the Association.

The Activity Fee is the chief source of income for the Association's activities. The student's "I" card will admit him free of charge to all University social, cultural, and athletic activities. Full refund of the fee will be given to students withdrawing from the University within one month from the first day of classes. After the first month no refunds will be given. Other income for the Association comes from the Co-op Bookstore profits, athletics income, and income from all other events sponsored by the Association.

Facilities under the governance of the Student Cooperative Association are the Student Union, the Co-op Bookstore, and the University Lodge.

ARTIST-LECTURE SERIES

The Student Cooperative Association cooperates with the Office of Cultural Affairs and Committee H of the University Senate to promote a series of dramatic performances, musical concerts, and dance performances at the University every year. Attendance at these programs is free for all students and faculty members. In addition, the Music Department presents numerous faculty and student recitals, to which the entire University community is invited.

STUDENT PUBLICATIONS

THE INDIANA PENN, the campus newspaper is published three times a week, Monday, Wednesday and Friday, by students who wish to gain writing experience. Interested students are advised to attend the organizational meeting, which is held early each semester.

The positions of editors and news editors are filled by Student Government action upon recommendation of a student-faculty committee. The co-editors select their own staff. There are 10 paid staff positions.

Applications for editor and news editor may be obtained from the PENN adviser. Only those students with at least one semester experience on the PENN staff are eligible to apply for the two top positions.

THE OAK is the University yearbook, a pictorial and written review of the year's activities. Subscriptions may be purchased during the Fall Semester. The Daily Bulletin will carry notices of the subscription drive.

Applications for staff positions may be obtained from the Director of Public Relations. From these applications, a committee, composed of students and faculty, selects the staff members. The ten paid positions on the staff are subject to the approval of the Student Government.

A student-sponsored magazine gives undergraduates the opportunity to see their best literary efforts in print. Any student may submit articles, short stories, short plays, poems, and essays for publication. Instructions for submitting manuscripts appear in the Daily Bulletin in November of each year.

Application for the editorial positions on the literary magazine should be made to the advisers, but the final selection is made by the Student Government acting on the recommendation of the committee on publications.

The UNIVERSITY DIRECTORY is distributed early in the fall term to students and faculty. It contains a directory of all properly registered students, or staff, and of University offices.

THE EYE, a student handbook, is distributed annually to all students, free of charge. It includes rules and regulations, the extra-curricular program, and general information of interest to students.

ATHLETICS

Men's Athletics

Herman Sledzik, Director

Men's athletic teams of the University compete under the rules of the National Collegiate Athletic Association and the National Association of Intercollegiate Athletics and hold membership in both organizations.

In each season of the academic year, the University sponsors at least three sports simultaneously. A total of eleven varsity sports are offered during the school year.

Sports offered in the fall include cross country, football

and soccer. Basketball, wrestling, swimming and rifle take the stage in the winter, and track and field, golf, baseball, and tennis hold the spotlight in the spring.

Along with varsity squads in the respective sports, football, basketball, wrestling and baseball, teams compete on the freshman or junior varsity level.

Women's Athletics

Ruth Podbielski, Director

Women's Athletic teams of the University compete under the rules of the Division of Girl's and Women's Sports and the Association of Intercollegiate Athletics for Women. Varsity teams compete in tennis, volleyball, field hockey, basketball and fencing. Clinic teams/clubs compete on limited schedules in swimming, softball, and gymnastics.

Intramurals

A well organized and varied program of intramural sports and athletic activities is conducted for men, for women and on a coeducational basis.

In addition to participation in seasonal team and individual sports in organized intramural tournaments, men and women may participate in the Gymnastic Club, Contemporary Dance Performance Group, and the IUPisces, a syncronized swimming group.

Intramural handbooks are available for men and women. Men should contact Dr. Louis Sutton, Intramural Director, Memorial Field House. Women should contact Miss June Korab, Intramural Director, Waller Gymnasium.

RELIGIOUS LIFE

The religious life of students is cared for through the activities of some twelve independent organizations. Three of these, the Newman Club, the United Campus Ministry, and the Lutheran Center, maintain private meeting facilities near the campus. Others affiliate with and meet in local churches. For those groups too small to arrange their own needs, the University undertakes to provide limited facilities and faculty advisement.

All students are urged to attend their choice of the many community places of worship and to participate in the area, district, and national conferences which provide opportunity for the study of religious problems.

EXTRACURRICULAR ACTIVITIES

A large number of extracurricular organizations conduct active programs on the Indiana University of Pennsylvania campus. In order to be recognized as an official University organization, it must be approved by the Student Government Association and the Administrative Council of the University. Below are listed organizations presently recognized as extracurricular groups on the Indiana campus.

Clubs and Organizations

American Chemical Society
American Guild of Organists
American Management Association
Art Club
Association of the United States Army
Basketball Club
Black Student League
Campus Christian Fellowship
Cheerleaders
Chess Team
Chi Alpha
Chi Alpha Sigma
Chi Beta Phi
Committee for Cooperative Assertion for Student Power
Contemporary Dance Performance Group
Counterpart
Criminology Club
Democratic Club
Economics Club
El Circulo Espanol
Elementary Education Club
English Club
Equal Opportunity for Women
Equestrian Club
Fencing Club — Women
Foreign Students' Club
Free
French Club
Future Business Leaders (Phi Beta Lambda)
Geographical Society
Geo-Science Club
Grotto
Gymnastics Club
Hillel Foundation
Indiana Power and Light Company
Indiana University Amateur Radio Club
Interfraternity Council
International Relations Club
IUP Council for Exceptional Children - Chapter 480
IUP Home Economics Association
IUP Ice Hockey Team
IUP Karate Club
IUP Outing Club
IUP Overcomers
IUPisces
IUP Pistol Team
Indiana University Slide Society
Inter-Collegiate Conference on Government
Iota Mu Colony
I-Uppers

Joint Judicial Board
Judo Club
Kaydeens
L'Esprite de Bleu
Masquers
Mathematics Club
McKeldin Philosophy Society
Men's Varsity "I"
Middle Eastern Council on Cultural Affairs
Music Educators Club
National Student Speech and Hearing Association
Newman Club
Nurses Club
Non-Resident Women's League
Operation Up-Lift
Orienteering Club
Orthodox Christian Fellowship
Panhellenic Association
Pershing Rifles
Physics Club
Psychology Club
Ranger Company
Republican Club
Residence Hall Association
Rifle Team
Safety Club
Society for Education Redevelopment
Sociology-Anthropology Club
Student PSEA-NEA
Student Government
Student Religious Liberals
Student Union Board
Student Welfare Rights Organization
Students for Human Life
Unidentified Flying Objects
United Campus Ministry
Veterans' Club
Volleyball Club — Women
Women's Club Softball
Women's Club Swimming
Women's Intramurals
Women's Physical Education Majors Club
Women's Precision Drill Team
X Athletic Club
Young Americans for Freedom
Zero Population Growth, Inc.

Fraternities and Sororities

Honorary

Alpha Psi Omega, honorary dramatic
Chi Beta Phi, honorary science
Delta Omicron, honorary music for women
Delta Phi Delta, honorary art
Gamma Rho Tau, honorary for business men
Gamma Theta Upsilon, honorary geography
Kappa Delta Pi, honorary educational
Kappa Mu Espilon, honorary mathematics
Kappa Omicron Phi, honorary home economics
Lambda Alpha Epsilon, honorary criminology
Phi Alpha Theta, honorary history
Phi Mu Alpha Sinfonia, Music Fraternity of America (for male music students)
Pi Delta Phi, honorary foreign language
Pi Gamma Mu, honorary social science
Pi Omega Pi, honorary business
Psi Chi, honorary psychology

Social Sororities

Alpha Delta Pi
Alpha Gamma Delta
Alpha Omicron Pi
Alpha Phi
Alpha Sigma Alpha
Alpha Sigma Tau
Alpha Xi Delta
Delta Phi Epsilon
Delta Zeta
Kappa Delta
Phi Mu
Sigma Kappa
Sigma Sigma Sigma
Zeta Tau Alpha

Social Fraternities

Alpha Chi Epsilon
Chi Alpha Sigma
Delta Sigma Phi
Kappa Delta Rho
Kappa Sigma
Lambda Chi Alpha
Phi Kappa Psi
Phi Kappa Theta
Phi Sigma Kappa
Sigma Chi Delta
Sigma Nu
Sigma Tau Gamma
Tau Kappa Epsilon
Theta Chi
Theta Xi

Service

Alpha Phi Omega
Phi Beta Lambda
Sigma Delta Pi
Gamma Sigma Sigma

REQUIREMENTS FOR GRADUATION IN ALL CURRICULA

Undergraduate students at Indiana University of Pennsylvania may pursue programs of study in any one of the six undergraduate schools: the School of Arts and Sciences; the School of Business; the School of Education; the School of Fine Arts; the School of Health Services; or the School of Home Economics. A student may earn the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, or Bachelor of Science in Education. To do so, the student must satisfy all of the degree requirements, which fall into three categories: 1) University requirements; 2) School requirements; 3) Department requirements. Requirements of the latter two categories may be found under the School and the Department in which the student is pursuing a program of study.

University requirements for graduation in all curricula consist of General Education requirements, residency requirements, and the credit hour and cumulative quality point average requirements.

GENERAL EDUCATION

All students are obligated to fulfill a basic program in General Education consisting of 52 semester credit hours. Different Schools and sometimes Departments within Schools may have specific variations as to how these General Education requirements are to be met.

The primary objective of General Education is to develop those understandings, attitudes, values and social skills that will enable the student to enjoy a life that is satisfying to himself as an individual and that will enable him to play a constructive role in his community and in

society, without respect to his professional vocational interest or activity.

The courses in the program will be distributed throughout the 4 years of University study, but the basic or introductory courses should be concentrated in the first 2 years of the student's program.

REQUIRED COURSES (20 credits)

ALL students (unless exempted) are REQUIRED to have credit for:

English 101, 102, AND 201 — *Eng I, II, and III	10 cr.
Art 101 — Introduction to Art or Music 101 — Introduction to Music or English 103 — Introduction to Theater	3 cr.
Mathematics (any course approved by the student's School Dean)	3 cr.
Health and Physical Education 101 — (Personal and Community Health)	2 cr.
Health and Physical Education 110 through 126 (Cooeducational physical activities — Elect one course)	1 cr.
Health and Physical Education 260 through 265 (Elect one course)	1 cr.
or	
Military Science 101 AND 102	4 cr.

These 20 credit hours are mandatory. The remaining 32 credit hours to fulfill the General Education requirement must be selected as follows: 6 to 9 credits in Humanities, 8 to 11 credits in Natural Sciences and Mathematics, and 15 credits in Social Sciences. A student may take 6 credits in the Humanities if he takes 11 credits in the Natural Sciences and Mathematics, or 9 credits in the Humanities if he takes 8 credits in the Natural Sciences. Elections must be made from the following:

*All English majors, in both the School of Arts and Sciences and the School of Education, MUST replace English 201 with English 202.

HUMANITIES (6 to 9 credits)

Foreign Language (2 courses)*	6 cr.
Art 115 – Art of Western Man to 1200 AD	3 cr.
Art 116 – Western Art: Ren. to Baroque	3 cr.
Eng 371 – The English Bible as Literature	3 cr.
Eng 358 – Modern American Fiction	3 cr.
Eng 359 – Black American Literature	3 cr.
Eng 346 – Contemporary American And British Poetry	3 cr.
His 101 – History of Civilization I	3 cr.
Mus 301 – Music History I	3 cr.
Phil 110 – World Religions	3 cr.
Phil 120 – Introduction to Philosophy	3 cr.
Phil 221 – Logic	3 cr.
Phil 222 – Ethics	3 cr.
Phil 328 – Asethetics	3 cr.

*NOTE: Students in the School of Arts and Sciences must take one year of an intermediate-level foreign language. Students in the School of Education may elect one year of a foreign language, any appropriate level, or two courses from the above list.

Exception: English Education majors must take the intermediate level sequence of a foreign language.

NATURAL SCIENCES AND MATHEMATICS (8 to 11 credits)

Laboratory science (any sequence from the following):	8 cr.
Biol 103-104 General Biology I and II	4 cr. each
Chem 111-112 General Chemistry I and II	4 cr. each
Chem 113-114 Concepts in Chemistry	4 cr. each
GS 111-112 Solar System and Stellar Astronomy	3 cr. each
GS 121-122 General Geology I and II with accompanying Labs (GS 131-132)	4 cr. each
Phys 111-112 Physics I and II with accompanying labs (Phys 121-122)	8 cr. total
Phys 131-132 Physics I and II – with accompanying labs (Phys 141-142)	8 cr. total
Sci 105-106 Physical Science I and II	8 cr.

NOTE: Geoscience 111-112 are a 6 semester hour pair which should be taken in the 111-112 sequence. If these are elected for fulfilling the General Education requirement for a Geoscience major, another science course of at least 3 semester hours must also be taken. Science 105-106, Physical Science I and II, may be taken with either course first; one course is in no way prerequisite to the other.

GENERAL ELECTIVES

In addition to the basic courses already listed, general electives in mathematics and the natural sciences may be selected, as advised in the student's major Department, from any of the following for which there is no prerequisite or for which the student has taken the prerequisites:

Biol 261 — Ornithology
Biol 262 — Entomology
Biol 271 — Evolution
Biol 272 — Conservatism of plant and animal resources
Biol-Ecology — Biol 110 and 120
CSci 200 — Intro to Computers
CSci 110 — Intro to Computer Science
GS 110 — General Astronomy
GS 120 — Geology of Penna.
GS 213 — Navigation
GS 330 — Paleontology
GS 321 — Mineralogy
GS 371 — Meteorology I
GS 361 — Oceanography I
Math 011 — Elementary Functions
Math 013-015 — Calculus for the Natural and Social Sciences
Math 362 — Probability and Statistics
Phys 222 — Mechanics I
Phys 231 — Electronics
Phys 242 — Optics
Phys 342 — Thermal and Statistical Phys.
Phys 472 — Nuclear Phys.
Sci 111*— Science in Modern Civilization
Sci 401**— Growth of Concepts and its Concepts I
Sci 402**— Growth of Concepts and Concepts II

*Listed under Chemistry
**Listed under Physics

SOCIAL SCIENCE ELECTIVES 15 cr.

Each student will elect 5 courses from the following:

Anth 101 — Introduction to Anthropology	3 cr.
Crmn 101 — General Administration of Justice	3 cr.
Econ 101 — Basic Economics	3 cr.

Ge 101 – World Geography	3 cr.
Hist 102 – History of Civilization II	3 cr.
Hist 104 – History of U.S. & Pa. II	3 cr.
IS 101 – World Politics	3 cr.
PolS 111 – American Politics	3 cr.
Psy 101 – General Psychology	3 cr.
Soc 151 – Principles of Sociology	3 cr.

NOTE: School of Education students are required to take History 104 and Psychology 201. The other three courses are up to the student's choice.

RESIDENCY

The last 30 credits in a student's curriculum must be earned by enrollment in courses at Indiana University of Pennsylvania.

CREDIT HOUR AND CUMULATIVE QUALITY POINT AVERAGE

Every student must complete a minimum of 124 semester hours to graduate, including 52 hours in General Education (all on a passing basis), and must have a 2.0 ("C" grade) cumulative quality point average and a 2.0 ("C") average in his major field.*

* Effective for members of the 1971 Freshman class onward and for transfer students admitted from Spring of 1971 onward.

ADVANCED PLACEMENT AND EXEMPTION EXAMINATIONS

Courses taken by students prior to admission to college under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit or by exemption from required subjects. Those who earn a grade of 3, 4, or 5 in the Advanced Placement Examination will be granted exemption from the course and/or credit toward the number of credit hours required for graduation.

For students who have had other unusual opportunities of instruction or have advanced in a given field, an opportunity to gain exemption from a course is afforded through exemption examinations, given at the discretion of each department. Departments offering such options will publicize their availability campus-wide every year. A

student who passes an exemption examination will be exempt from taking that course in his academic program.

When a student receives CREDIT for a course by examination, the credit will be applied to his graduation requirements just as though the course had been taken. If a student is granted EXEMPTION ONLY from a course, he will be permitted to take a free elective in place of that course.

This enables the student to further specialize, to correct weaknesses outside his major field, to build his knowledge in an ancillary area, or to introduce himself to an entirely different area.

Courses for which credit and/or exemption are awarded by examination will not be used in the determination of quality point averages.

APPLICATION FOR GRADUATION

It is the student's responsibility to complete an application for graduation form in the office of the Dean of his School, early in the term at the close of which he expects to graduate. Students are responsible for knowing and fulfilling the requirements for graduation in their degree program.

Certification for graduation is not final until approved by the Dean of the School in which the student is enrolled.

Students who expect to graduate at the end of the summer sessions must complete all requirements for graduation by the conclusion of the Main Summer Session, UNLESS PRIOR EXCEPTION be made by the student's School Dean. Diplomas will not be issued until all bills and obligations have been satisfied, including the degree fee.

SECOND BACCALAUREATE DEGREE

In order to receive a second or subsequent baccalaureate degree, a graduate of Indiana University of Pennsylvania or of another accredited college or university must earn at least 30 additional credits by enrollment in courses at Indiana University of Pennsylvania which are approved by the Department and the School in which the subsequent degree is earned. In addition, the student must meet any other degree requirements of the Department and the School in which the degree is earned.

THREE-YEAR DEGREE PROGRAM

There is no special significance to the 4-year baccalaureate program; more or less time could be used effectively in pursuit of the Bachelor's degree. For those who wish to graduate in 3 years, the accelerative features outlined below indicate how this could be accomplished:

Six semesters at 17 credits each	102 cr.
Exemption and credit for English 101	4 cr.
Advanced Placement Examination Program	
College Level Examination Program	
Departmental Examinations for exemption and credit	18 cr.
Summer Session Enrollment(s)	
Minimum requirement for degree	124 cr.

Any student who desires an accelerated program should consult BOTH his advisor AND the Dean of his School concerning the opportunities for credit by examination and the total credit hours and courses required for graduation.

THE SCHOOL OF ARTS AND SCIENCES

DR. FRANCIS G. McGOVERN, DEAN
ASSOCIATE DEANS: DR. CHARLES R. FUGET,
DR. JAMES R. GREEN, DR. RAYMOND L. LEE

GENERAL INFORMATION

The School of Arts and Sciences has as its objective the providing of a liberal education – which Mark VanDoren defines as "nothing less than a complete one" – as the basis of the student's preparation for a satisfying career. In a dynamic society such as America's, a broad liberal education accompanying career preparation is virtually a necessity. The School maintains an emphasis upon fundamental understanding and application of the basic principles of our cultural heritage, combined with development of a thorough background of knowledge in the student's specific area of interest. It seeks to promote in the student critical and objective thinking, analytical skill, and a keen awareness of his responsibilities to society as it prepares him for his chosen field.

DIVISIONS

The School's programs of study are the product of its departmental faculties, organized in three divisions: Humanities, Natural Sciences and Mathematics, and Social Sciences. It supports service courses available to non-Arts and Sciences students, as well as its own degree and non-degree programs. All Arts and Sciences students must major in a School discipline; double-majors and minors are

also available, as are interdisciplinary and pre-professional programs.

Humanities Division

English
French
German
Latin
Russian
Spanish
Speech and Theater
Philosophy

Pre-Professional Programs

Dental School Preparation
Law School Preparation
Medical School Preparation
Theological School Preparation
Veterinarian School Preparation

Related Professional Fields:

Preparation for:

Chiropractic
Pharmacy or Pharmacology
Optometry
Osteopathy
Podiatry

Natural Sciences and Mathematics Division

Biology
Chemistry
Computer Science
Geoscience
Geoscience-Geology
Applied Mathematics
Mathematics
Natural Sciences
Physics

Social Sciences Division

Criminology
Economics
Geography
History
International Studies
Government and Public Service
Political Science
Psychology
Regional Planning
Sociology Anthropology

DEGREES

The Departments of Biology, Chemistry, Geoscience, Mathematics, and Physics offer work leading to either a Bachelor of Science or a Bachelor of Arts degree, depending upon the specific course program pursued. The Bachelor of Science degree is appropriate to the Computer Science Department and to Regional Planning. All other programs of the School in the departments of Criminology, Economics, English, Geography, History, Philosophy, Political Science, Psychology, Sociology-Anthropology, Germanic-Slavic Languages, Romance and Classical Languages,

and the Center for International Studies lead to the Bachelor of Arts degree.

Several Arts and Sciences Departments sponsor Master of Arts or Master of Science degrees in the University's Graduate School, and the English Department offers a graduate program leading to the Doctor of Philosophy degree. Information on these programs should be obtained from the Graduate School.

DEGREE REQUIREMENTS

In addition to the University's General Education requirements, all students seeking a baccalaureate degree in the School of Arts and Sciences must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements, and for minoring in a specific field, appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the School, but should be opted only with adviser approval. As a general principle, there is considerable latitude in course choice for Arts and Sciences majors; for specifically required courses, substitutions in any program must have the written approval of the student's Department Chairman or the School Dean. The intermediate series foreign language requirement (a description follows) applies without exception to all Arts and Sciences degrees.

THE FOREIGN LANGUAGE REQUIREMENT. A candidate for a Bachelor of Arts or Bachelor of Science degree must demonstrate a proficiency in a foreign language equivalent to that attained upon completion of 2 years of college instruction in that language. This requirement may be met by:

a) Successful completion of two semesters at the second-year level in a specific foreign language; or
b) Successful completion of an exemption or credit examination in lieu of the above, the examination administered by the appropriate Indiana Foreign Languages Department.

Students with strong high school foreign language preparation should schedule the intermediate series sequence directly, for instance, French III. Students with less preparation should schedule the introductory level series, for instance, French I. Students uncertain as to the

strength of their preparation should seek the counsel of the appropriate Foreign Languages Department Chairman. Because of its sequential nature, all students should begin their foreign language course work early, certainly no later than in the third semester.

The foreign language requirement currently may be met through work in French, German, Greek, Latin, Russian, or Spanish.

Any foreign student, registered as such at Indiana, whose learned native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for an Arts and Sciences degree, if the Department he is majoring in does not require a specific language not thus covered.

SPECIAL CREDIT PROGRAMS

Majors in the School of Arts and Sciences may be interested in specialized learning available through programs administered by consortia such as the Marine Science Consortium or Foreign Tour programs. Credits obtained through such arrangements normally are applicable toward an Arts and Sciences degree. Also of interest are the School's credit-awarding Junior Year Abroad, Indiana at Valladolid (Spain) and Indiana at Duisburg (Germany) programs.

Marine Science Consortium

The Marine Science Consortium was established in 1968 for the purpose of promoting teaching and research in the Marine Sciences. The participating institutions include nine Pennsylvania State Colleges, Catholic University, D.C., Pennsylvania State University, West Virginia University, and Indiana University of Pennsylvania.

Although no formal curricula exist in the Marine Sciences, elective courses may be taken and credited toward undergraduate curricula in Biology, Geology, Geography and Earth Science. The Marine Science Consortium offers five 3-week sessions during the summer at the Delaware Bay Marine Science Station, Lewes, Delaware and the NASA-Wallops Island Station, Virginia. Normally, several research cruises are offered each summer.

Students must register for credit and pay credit fees to a

participating institution. Room and board fees are paid to the Consortium. Applications for all summer sessions must be submitted to the institutional Director by April 1. Students must be accepted by the Consortium before registering at a participating institution. For brochure, summer bulletin, and application forms, contact either:

Dr. Gould F. Schrock, Director
Biology Department, or

Prof. Paul Prince
GeoScience Department

FOREIGN STUDY

Junior Year Abroad: Basel and Verona

Indiana has combined with 26 colleges and universities in Eastern Ohio, West Virginia and Western Pennsylvania to offer a Junior Year Abroad Program for students in the Humanities and Social Sciences. For this purpose, the Regional Council for International Education operates colleges in Switzerland and Italy where courses in language, art, literature, and national-international issues are taught in English. Students are encouraged to do extensive traveling during 7 weeks of scheduled vacations. A comprehensive fee covering tuition, housing and food for the year, plus partial travel, was $3,600 in 1972-73. Students may earn 30 semester hours of credit. Interested students should consult the Director of the Center for International Studies, Indiana.

Indiana at Valladolid

For the past 10 years Indiana University, Department of Romance and Classical Languages, has sponsored a semester of study at the University of Valladolid, Spain. For details, see the program description in the Department section which follows; brochures may be obtained from the Department Chairman.

Indiana at Duisburg

The University maintains a two-semester sequence of study abroad for German majors. The program is open to upper level students both in Arts and Sciences and in Education, although future plans call for accommodation of other students having specific interest in a foreign study experience and evidencing sufficient preparation in the German language. The program involves a direct exchange

of students with the university in Duisburg. Further information may be secured by contacting the Chairman of the Department of Germanic and Slavic Languages.

Additional Opportunities for Foreign Study

In addition, students have the option of studying for credit in a great variety of programs offered by cooperating institutions. The Center for International Studies cooperates with the Regional Council and Pennsylvania Consortium for International Education in the Salzburg Summer Program and a program in Cuernavaca, Mexico, where credits can be earned in almost any discipline. Students have used the intern and individualized study arrangements of the University to study on a kibbutz in Israel, on the Chapman College Afloat program, at the Beaver College London Semester, and in the programs of the Institute for European Studies. Students planning to study abroad should select the program which best suits their needs as early as possible so that their total undergraduate program can be planned in conjunction with the study-abroad program selected. The Center for International Studies will assist students who plan to study abroad.

Contemporary Europe

For the past several years the school has sponsored a 3 week study-travel tour during the Pre-Session. Designed for students in every department of the University, this tour emphasizes the basic political, economic, social, and military organization of Contemporary Europe and the unresolved tensions of that part of the world. Background reading, lectures in major capitals, sightseeing, and an extensive personal diary are required. Two – four hours of graduate-undergraduate credit are granted.

For details write to: Director: Center for International Studies.

Argentine Seminar

The University cooperates with the Pennsylvania Consortium for International Education in sponsoring an Argentine Seminar program in Buenos Aires during the Main and Post sessions of Summer School. Six semester

hours credit may be earned: 3 credits in conversational Spanish and 3 credits in Social Science Special Studies.

The basic cost of the program in 1972 was $666. This included the cost of transportation, room and board. University fees depend on the number of credits elected by the student. Applicants must have completed the intermediate sequence in Spanish.

India: A Nation in Transition

In this special program two weeks on campus will be devoted to lectures, individual research, group activity, film, and personal experiences designed to acquaint the student with India (as much as is possible in two weeks).

Seven weeks of study will be included in India related to economics, culture, geography, politics, and personal experience in a non-western culture. It will include living for a week with individual Indian families, industrial development visits, experiences related to non-western religion with visits to a limited number of shrines, examination of contributions of Indian culture and a look at Indian urbanization.

STUDENTS SHOULD CONSIDER THE ABOVE CREDIT PROGRAMS AS MEANS OF WIDENING THEIR INTELLECTUAL HORIZONS, AS TRAVEL OR SPECIAL LOCATION IS COMBINED WITH STUDY. ARRANGEMENTS, INCLUDING TIMING AND THE SPECIFICS OF CREDIT RECOGNITION, SHOULD BE WORKED OUT WITH THE RESPONSIBLE UNIVERSITY OFFICES REFERRED TO WELL IN ADVANCE.

INTERNSHIP PROGRAMS

Several departments of the School have established programs under which students engage in supervised work experience for credit. During the past year Indiana students have worked in Harrisburg, Pa., as aides to state legislators; with the Governor's Justice Commission and the Local Government Commission; and with the Investigations Division, Pennsylvania Department of Justice. Others have worked in the state hospitals at Torrance, Woodville and Mayview, at correctional institutions in Pittsburgh, Greensburg, and Warrendale, as child therapists at the Indiana County Guidance Center, as peer group counselors on the local campus, as an assistant to the Pennsylvania State

Republican Chairman, as on-site guides at The United Nations, workers on an Israeli kibbutz and student aides for the Department of Education, Puerto Rico. Other students have worked in the Pittsburgh federal probation office. Many students have worked with major political parties and candidates at the local and state level. At the county level, they have been attached to the County Planner, the Common Pleas Court, Coroner, Treasurer, Commissioners, and Boro Manager. Students have worked in the Washington office of Pennsylvania Congressmen, and in the Governor's Office.

For more information about specific Internship programs the chairman for the department in which the student is majoring should be consulted.

PRE-PROFESSIONAL PROGRAMS

The School of Arts and Sciences offers five pre-professional programs, the goal of each of which is not an Indiana degree, necessarily, but preparation for acceptance by a professional school; pre-dental, pre-legal, pre-medical, pre-theological, and pre-veterinary medicine. Each program is grounded in an Arts and Sciences department(s) — pre-dental in Chemistry; pre-legal in English, History, Philosophy or Political Science; pre-medical and pre-veterinary in Biology; and pre-theological in Philosophy. The programs are so designed that, should work at a professional school not ensue, the student may earn an Indiana University baccalaureate degree with relatively minor adjustment in course program, provided he has been faithful to faculty advisement. In addition, the School offers a major in the Natural Sciences for those students whose goal is chiropractic, pharmacy or pharmacology, optometry, osteopathy, podiatry, or a similar professional field.

The pre-dental, pre-medical, and pre-veterinary programs presuppose that the student has an excellent background in the high school sciences and mathematics, or will prove to be an excellent college student. Because admission standards at most professional schools are high, students desiring pre-professional preparation for any of these fields will find it advantageous to major in the basic department discipline during at least their first year, making known to the department chairman their eventual goal but delaying explicit affiliation with the pre-professional program until they have established themselves academically at the college level. Commitment to any pre-professional program must be made not later than the end of the student's fourth semester.

Students interested in the related health fields (pharmacy, optometry, physical therapy, podiatry, etc.) should so identify themselves to the Director of the Natural Sciences and Mathematics Division during their first semester of Indiana University attendance, or as soon thereafter as possible.

BIOLOGY DEPARTMENT

FRANCIS W. LIEGEY, CHAIRMAN; ALICO, BAKER, CONWAY, CHARNEGO, DIETRICH, FERRENCE, FORBES, GALLATI, GREAVES, GOLD, HUE, HUMPHREYS, MERRITT, J. H. MILLER, R.N. MOORE, PICKERING, SCHROCK, STAPLETON, STRAWCUTTER, VALLOWE, WAECHTER, WASKOSKIE, ZENISEK

Degrees offered by the Biology Department are the Bachelor of Science in Biology, the Bachelor of Arts in Biology, and the Bachelor of Science in Education with a Biology major. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education. The department also offers a Biology minor.

CURRICULA

The program leading to a B.S. in Biology is a concentrated curriculum designed to give the student adequate preparation for admission to graduate school or professional colleges, such as Medical, Dental and Veterinary Colleges. In addition, with the proper selection of electives, the graduate should be qualified to assume a position in industry or in state and federal agencies requiring well-trained biologists.

The program leading to a B.A. in Biology is a more flexible curriculum, permitting the student to obtain an adequate background in related areas. Students electing this curriculum would be most interested in going into the fringe areas of biology, such as sales, technical services, or management. Although the training should be sufficient for admission to graduate school or professional colleges, the student would be at a disadvantage compared with students who elect the B.S. program.

The program leading to the B.S. in Education with a Biology major is designed to prepare for Certification in public school teaching.

Core Program

Requirements for ALL Biology majors are 15 credits in Biology, 16 credits in Chemistry, and 4 credits in

Mathematics, as follows:

Biology (15 credits)	
Biol 105 – Cell Biology	4 cr.
Biol 110 – Plant Biology	5 cr.
Biol 120 – Animal Biology	5 cr.
Biol 490 – Biology Seminar	1 cr.
Chemistry (12 credits)	
Chem 111 – Gen Chem I	4 cr.
Chem 112 – Gen Chem II	4 cr.
Chem 231 – Organic Chem I	4 cr.
Chem 351 – Biochemistry	4 cr.
Mathematics (4 credits)	
Math 013 – Calc I	4 cr.

B.S. in Biology

In addition to the Core Program, requirements for the degree of Bachelor of Science in Biology are 18 more credits in Biology, 4 more credits in Chemistry, 4 more credits in Mathematics, and 8 credits in Physics, as follows:

Biology	
Biol Electives	18 cr.
Chemistry	
Chem 232 – Organic Chem II	4 cr.
Mathematics	
Math 015 – Calc II	4 cr.
Physics	
Physics 111 – Physics I	3 cr.
Physics 112 – Physics II	3 cr.
Physics 121 – Physics I Lab	1 cr.
Physics 122 – Physics II Lab	1 cr.

B.A. in Biology

In addition to the Core Program, requirements for the degree of Bachelor of Arts in Biology are 12 more credits in Biology electives.

B.S. in Education – Biology Major

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a Biology major are 13 additional credits in Biology, 8 credits in Physics, 27 credits in Professional Education, and the General Education requirements of the University as

follows:

Core Program – (35 credits) (see page 91)

Biology (13 credits)

Biol. 262 – Ecology	3 cr.
Biol. 263 – Genetics	3 cr.
Biol. Electives	7 cr.

Physics (8 credits)

Same as for B.S. in Biology – see page 91

Professional Education (27 credits) – see page 228

General Education – see pages 73–77

Minor in Biology, Arts and Science Students

To minor in Biology, a student must gain the permission of the Biology Department Chairman. The minor consists of a minimum of 17 credits and a suggested course sequence is as follows:

Biol 103 – Gen Biol I	4 cr.	or Biol 105 – Cell Biol.	4 cr.
Biol 140 – Gen Biol II	4 cr.	or Biol Elective	3 cr.

plus

Biol 110 – Plant Biol	5 cr.
Biol 120 – Animal Biol	5 cr.

Special Required Courses

The Biology Department provides certain special courses as services for other Schools and Departments.

All students to receive degrees in Elementary Education MUST take Biol 311 and EL 312.

All students to receive degrees in Home Economics, Physical Education, and Nursing must take Biology 150, 151, and 241.

COURSE DESCRIPTIONS

A travel fee will be required for all field courses.

General Education Courses

Biol 103 GENERAL BIOLOGY I 4 cr.

Introduces the student to the biological components of some of man's major problems. Considerable time spent with information and methodology current in the biological sciences: ecology, energy storage and release, molecular transport, chemical control, and development. Three hours lecture, 2 hours laboratory per week.

Biol 104 GENERAL BIOLOGY II 4 cr.

Prerequisite: Biol 103.

Completion of consideration of background information, with study of selected areas of biology, such as genetics, evolution, and behavior. Course culminates with intensive consideration of the impact of biological problems on man's existence. Three hours lecture, 2 hours laboratory per week.

Biological Science Courses

Biol 105 CELL BIOLOGY 4 cr.

Introductory course, designed to increase the depth of the beginning student's understanding of the structural, functional, developmental and evolutionary aspects of the cell concept. Three hours lecture, 2 hours laboratory per week.

Biol 110 PLANT BIOLOGY 5 cr.

Prerequisite: Biol 105 or special permission.

Plant structure, function and development, recognition and grouping, environmental relationships, and economic importance of plants considered. Three hours lecture, 4 hours laboratory per week.

Biol 112 PLANT DIVERSITY 3 cr.

Prerequisite: Biol 110.

Anatomy and life processes of selected algae, bacteria, fungi, mosses, ferns and their allies. Two hours lecture, 3 hours laboratory per week.

Biol 120 ANIMAL BIOLOGY 5 cr.

Prerequisite: Biol 105 or special permission.

Morphology, physiology, embryology, ecology, taxonomy, social and economic importance of animals; consideration of principles applicable to a correlation of classical with present zoology. Three hours lecture, 4 hours laboratory per week.

Biol 251 PLANT TAXONOMY 3 cr.

Prerequisite: Biol 110.

Considers the collection, preservation, and identification and taxonomy of plants of this region. Two hours lecture, 3 hours laboratory per week.

Biol 252 FIELD ZOOLOGY 3 cr.

Prerequisite: Biol 120.

Field study of animals; collection and preservation techniques for utilization in museum and instructional use; student collections and field trips required. Two hours lecture, 3 hours laboratory per week.

Biol 261 ORNITHOLOGY 3 cr.

Prerequisite: Biol 105 or Biol 103 and 104.

A study of the birds of the region. Indoor laboratory as well as field trips required. Two hours lecture, 3 hours laboratory per week.

Biol 262 GENERAL ENTOMOLOGY 3 cr.

Prerequisite: Biol 120

Morphology, anatomy, ecology, taxonomy, economic and public health importance of insect orders, particularly those of Western Pennsylvania; student collection and field trips required. Two hours lecture, 3 hours laboratory per week.

Biol 263 GENETICS 3 cr.

Prerequisites: Biol 110 or 120 and Chem 231.

Deals with the distribution and function of the hereditary material; special emphasis on microbial, viral, and molecular genetics. Two hours lecture, 3 hours laboratory per week.

Biol 271 EVOLUTION 3 cr.

Prerequisite: One year biology.

Historical development of evolutionary thought, evidence for evolution and operational mechanisms involved; origin and phylo-genetic relationships of biologic groups. Three hours lecture per week.

Biol 272 CONSERVATION OF PLANT AND ANIMAL RESOURCES 3 cr.

Prerequisites: Biol 105 or Biol 103 and 104.

Special attention to a study of accepted practices in soil, water forest and game conservation. Two hours lecture, 3 hours laboratory per week.

Biol 281 PARASITOLOGY 3 cr.

Prerequisite: Biol 120.

Structure, physiology, ecology, life cycles, pathology and treatment of parasitic protozoa, flatworm and roundworm species of man. Dissection of hosts for parasites. Two hours lecture, 3 hours laboratory per week.

Biol 285 BIOTECHNIQUE 3 cr.

Prerequisites: One year biology, one year chemistry.

Production of whole mount, smear, squash, microtome section and serial section microscope slides of both plant and animal organisms. Three combined lecture/laboratories of 2 hours each per week.

Biol 331 ANIMAL DEVELOPMENTAL BIOLOGY 3 cr.

Prerequisite: Biol 120.

Aspects of comparative and molecular development of animals. Two hours lecture, 3 hours laboratory per week.

Biol 332 COMPARATIVE VERTEBRATE ANATOMY 3 cr.

Prerequisite: Biol 122.
Comparative study of the lamprey, shark, frog and cat. Course based on a systematic approach, from developmental point of view. Two hours lecture, 4 hours laboratory per week.

Biol 350 CELLULAR PHYSIOLOGY 3 cr.

Prerequisite: Chem 231.
The topics considered include nutrition, the uptake and preparation of food and oxygen, the release of energy, elimination of waste products, and would complement the animal and plant physiology. Two hours lecture, 4 hours laboratory per week.

Biol 351 PLANT PHYSIOLOGY 3 cr.

Prerequisites: Biol 110, Chem 231.
Studies the physiological processes occurring in plants, considered in relation to the growth and development of the plant. Two hours lecture, 3 hours laboratory per week.

Biol 352 COMPARATIVE ANIMAL PHYSIOLOGY 3 cr.

Prerequisites: Biol 120, Chem 351.
Comparative study of homeostatic mechanisms and systems in animals and their relation to the fundamental chemical and physical events in cells. Two hours lecture, three hours laboratory per week.

Biol 361 MICROBIOLOGY 3 cr.

Prerequisites: Biol 105, Chem 351.
Introduction to the morphology, physiology, and ecology of procaryotic organisms. Importance of microorganisms in basic and applied research, economics, infection, and immunology are discussed. Two hours lecture, 3 hours laboratory per week.

Biol 362 ECOLOGY 3 cr.

Prerequisites: Biol 110 and 120.
A study of interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips. Two hours lecture, 3 hours laboratory per week.

Biol 372 PLANT ANATOMY 3 cr.

Prerequisite: Biol 110.
The embryological development and the growth and maturation of typical vascular plants; emphasis placed on the differentiation and maturation of plant organs of various families. Two hours lecture, 3 hours laboratory per week.

Biol 381 MYCOLOGY 3 cr.

Prerequisite: Biol 110.

Involves the systematics, morphology, and physiology of Mysomyocophyta and Eumpcophyta, with emphasis on economically important and experimentally useful taxa. Two hours lecture, 3 hours laboratory per week.

Biol 441 GENERAL PHYSIOLOGY 4 cr.

Prerequisites: Biol 350, 351, or 352, Chem 351, Math 013 (or permission of instructor)

A molecular approach to quantitative analysis of the mechanisms of functional operation and coordination in living organisms. Emphasis is directed toward the chemical and physical principles operating at the primary functional units of organization. Three hours lecture and three hours laboratory per week.

Biol 446 DENDROLOGY 3 cr.

Prerequisites: Biol 110 or 112, or by permission of instructor.

A study of the woody plants as to their identification, distribution, ecology, culture, anatomy, physiology, mensuration and utilization. Two hours lecture, 3 hours laboratory per week.

Biol 472 RADIATION BIOLOGY 3 cr.

Prerequisites: Two years Biology, one year Physics, and General, Organic, and Biochemistry.

Aspects of nuclear physics and radioactive isotopes; uses, effects, detection and measurement of radioactive nuclides used in biology. Two hours lecture, 3 hours laboratory per week.

Biol 489 LITERATURE OF BIOLOGY 2 cr.

Literature of Biology is designed for the student who wishes to acquaint himself with some of the useful sources of reference in biology. Given only in the summer.

Biol 490 BIOLOGY SEMINAR 1 cr.

Discussion of recent trends in biological thought and research. Students report on assigned readings and/or personal research.

Biol 498 PROBLEMS IN BIOLOGY 1-3 cr.

The student investigates independently any field of biology in which he is interested. Work supervised by a faculty member but does not involve regular class or laboratory hours. Enrollment by permission only.

Biol 499 RESEARCH BIOLOGY 1-3 cr.

Designed to acquaint the undergraduate student with the techniques of modern research by actively engaging in a program of biological experimentation and/or research with a faculty member (or members). No formal lectures or laboratories. Enrollment by permission only.

Course Required Of Secondary Education Majors

Ed 451 TEACHING SCIENCE IN THE SECONDARY SCHOOL 3 cr.

Background given to help the science major meet the problems of teaching science. Various inquiry approaches useful in meeting objectives of a contemporary science class are taught and exemplified. Two hours lecture, 2 hours laboratory per week.

Courses Required For Students In Elementary Education

Biol 311 ENVIRONMENTAL BIOLOGY 4 cr.

A laboratory and field course providing the student with basic knowledge in biology and its practical implications. Physical and biological aspects of the environment are studied. Three hours lecture, 3 hours laboratory per week.

El 312 TEACHING OF ELEMENTARY SCIENCE 3 cr.

Emphasis placed upon science as it relates to the child and the curriculum, planning for teaching science, and recent innovations in science teaching. (Course offered on the block only.)

Courses Required For Students in Home Economics, Physical Education and Nursing

Biol 150 VERTEBRATE ANATOMY 3 cr.

Study of the systemic anatomy of the vertebrate's body. The course deals almost entirely with the mammal. The cat is used for dissection in the lab. Two hours lecture, 3 hours laboratory per week.

Biol 151 HUMAN PHYSIOLOGY 3 cr.

Functions of the various organ systems of humans. Recommended for non-majors, not open to majors. Two hours lecture and one lecture-demonstration per week.

Biol 241 GENERAL MICROBIOLOGY 3 cr.

Study of microorganisms, and the role that they play in water, soil, food, and infection. Standard methods and techniques are emphasized in the laboratory. Two hours lecture, 3 hours laboratory per week. (Non-majors only)

NOTE: See Marine Science Consortium Section for additional course listings.

CHEMISTRY DEPARTMENT

PAUL R. WUNZ, JR., CHAIRMAN; BORDAS, CHRISTODOULEAS, COLEMAN, COSTA, FAZIO, HARTLINE, HEARD, KOLACZKOWSKI, MARKS, D. R. McKELVEY, NELSON, PATSIGA, SCROXTON, SYTY, TACKETT, ZAMBOTTI, ZIMMERMAN.

Degrees offered by the Chemistry Department are the Bachelor of Science in Chemistry, the Bachelor of Arts in Chemistry and the Bachelor of Science in Education with a Chemistry major. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education. The department also offers a Chemistry minor.

CURRICULA

The B.S. in Chemistry may be considered to be a professional degree. The student completing this major should be qualified to assume a position in industry or government as a chemist or to apply for admission to graduate school to pursue advanced studies leading to an M.S. or Ph.D. degree. The student considering going to a professional school should also be qualified upon completion of this degree. Those students who are particularly interested in biochemistry should elect a few biology courses.

The curriculum leading to the B.A. in Chemistry is designed to allow for the workable union of nonscience areas with chemistry in such a way as to retain the fundamental science and mathematics requirements needed for a career in chemistry. A cognizant selection of electives will qualify the student for entrance into many fields in which there is an acute need for educated people and, at the same time, satisfy the entrance requirements of various professional and graduate schools.

Some possible and useful combinations between chemistry and other disciplines would include chemistry-business administration, chemistry-criminology, chemistry-government, chemistry-predental, chemistry-prelaw, chemistry-premedicine, chemistry-prepharmacy, and chemistry-English (technical writing). The student must arrange a practical sequence of nonchemistry courses in consort

with his advisor and the Department Chairman concerned.

The curriculum leading to the B.S. in Education with a Chemistry major is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified course work, the graduate is eligible for Certification as a chemistry teacher by the Pennsylvania Department of Education.

General Requirement.

Concepts in Chemistry I and II (Chem 113-114 – 8 credits) meet the University's General Education requirement for a laboratory science and are prerequisite for the remaining chemistry courses for all chemistry degrees.

Core Program.

Requirements for ALL Chemistry majors, beyond the General Education Requirements, are 21 credits in Chemistry and 8 credits in Mathematics, as follows:

Chemistry		
Chem 231-232	–Org Chem I and II	8 cr.
Chem 321	– Quant Anal	4 cr.
Chem 322	– Instrumental Anal	4 cr.
Chem 341	– Phys Chem I	4 cr.
Chem 343	– Phys Chem Lab I	1 cr.
Mathematics		
Math 017-019	– Calc I and II for Physics	8 cr.

B.S. in Chemistry

In addition to the General Requirement and the Core Program, requirements for the degree of Bachelor of Science in Chemistry are 14-15 more credits in Chemistry, 3 more credits in Mathematics, and 8 credits in Physics. In addition, the Department requires that the foreign language requirement (6 credits) of the School of Arts and Sciences be fulfilled by German or Russian courses. Course numbers are as follows:

Chemistry		
Chem 301	Chemistry Seminar	1 cr.
Chem 342	Phys Chem II	3 cr.
Chem 344	Phys Chem Lab II	1 cr.
Chem 411	Inorg Chem	3 cr.
Electives from the following (6-7 credits):		
Chem 331	Org Qual Anal	3 cr.

Chem 333	Org Mech and Sterochem	3 cr.
Chem 351	Biochem	4 cr.
Chem 412	Inorg Preparations	3 cr.
Chem 421	Advan Instrum Anal	3 cr.
Chem 441	Advan Phys Chem	3 cr.
Chem 498	Problems in Chem	1-2 cr.

Mathematics (one of the following)

Math 233	Intro to Linear Algebra	3 cr.
Math 361	Ord Diff Eq	3 cr.
Math 363	Intro to Prob	3 cr.
Math 381	Advan Calc I	3 cr.
CSci 101	Introduc to Computer Science	3 cr.

Physics

Phys 131-132	Phys I and II	3 cr. each
Phys 141-142	Phys Lab I and II	1 cr. each

Foreign Language

Ger 251 (Ger III) and (Ger IV) or Ger 256 (Sci Ger)	3 cr. each
Rus 251-252 — Russian III and IV	3 cr. each

B. A. in Chemistry

In addition to the General Requirement and the Core Program, requirements for the degree of Bachelor of Arts in Chemistry are 10 more credits in Chemistry, 8 credits in Physics, and 15 credits minimum in a complementary field, including a minimum of 6 credits of advanced work. The foreign language requirement is the same as for the B.S. in Chemistry. Courses are as follows:

Chemistry

Any 10 more credits

Physics

Phys 111-112	Phys I and II	3 cr. each
Phys 121-122	Phys Lab I and II	1 cr. each

Foreign Language

Ger 251 (Ger III) and Ger 252 (Ger IV) or Ger 256 (Sci Ger) or	3 cr. each
Rus 251-252 — Russian III and IV	3 cr. each

B.S. in Education (Chemistry Major)

In addition to the General Requirement and the Core Program, requirements for the degree of Bachelor of Science in Education with a Chemistry major are 8-9 more credits in Chemistry, 4 credits in Biology, 8 credits in

Physics, and 3 credits in Education, as follows:

Chemistry		
Chem 411	– Inorg Chem	3 cr.
Chem 498	– Problems in Chem	2 cr.
Chem 342	– Phys Chem II	3 cr.
or		
Chem 351	– Biochem	4 cr.
Biology		
Biol 105	– Cell Biology	4 cr.
Physics		
Phys 131-132	– Phys I and II	3 cr. each
Phys 141-142	– Phys Lab I and II	1 cr. each
Education		
Ed 451	– Teaching Science in the Secondary School (see Biology)	3 cr.

Minor in Chemistry

The minor in Chemistry consists of a minimum of 20 credits, selected as follows:

Chem 111-112	– Gen Chem I and II	8 cr.
Chem 231-232	– Org Chem I and II	8 cr.
Chem 321	– Quant Anal	4 cr.
or		
Chem 323	– Anal Methods	4 cr.
or		
Chem 351	– Biochem	4 cr.

Special Courses

The Chemistry Department provides certain special courses as services for other Schools and Departments, such as Chemistry 101 and 102 for Home Economics and Health Professions, Chemistry 103 for Physical Education and Indiana Hospital nurses, Chemistry 305 and 306 for secondary education Chemistry majors, and Chemistry 355 for Home Economics

COURSE DESCRIPTIONS

For those courses which combine lecture and laboratory, attendance and satisfactory performance in the laboratory are required in order to pass the course.

Chem 101-102 CHEMISTRY FOR HOME ECONOMICS AND HEALTH PROFESSIONS I AND II 4 cr. each

Topics from the fields of inorganic, organic and biochemistry that are most important to the student of home economics and nursing. Three hours lecture, 2 hours laboratory per week.

Chem 103 PRINCIPLES OF CHEMISTRY 4 cr.

A one-semester course designed to survey the areas of inorganic, organic and biochemistry. Open only to Physical Education majors and Indiana Hospital nurses. Three hours lecture, 2 hours laboratory per week.

Chem 111-112 GENERAL CHEMISTRY I AND II 4 cr. each

Lecture-discussion of the principles of chemistry, including theory and applications. The laboratory illustrates the principles discussed. Three hours lecture, 3 hours laboratory per week.

Chem 113-114 CONCEPTS IN CHEMISTRY 4 cr. each

These two semesters of general chemistry are intended to give the chemistry major an in-depth and quantitative background in the areas of physical, inorganic and analytical chemistry. Three hours lecture, 3 hours laboratory per week.

Chem 231-232 ORGANIC CHEMISTRY I AND II 4 cr. each

Prerequisites: Chem 112 or Chem 114

Study of the compounds of carbon, with special emphasis on the structure and reactions of the more important classes of carbon compounds. Laboratory work involves preparation and purification of representative compounds. Three hours lecture, 4 hours laboratory per week.

Chem 301 CHEMISTRY SEMINAR 1 cr.

Discussion of current technical literature, current research problems of the staff, lectures by outside chemists, and student presentations. Open to junior or senior chemistry majors or by permission of the instructor. One hour per week.

Chem 302 INDUSTRIAL CHEMISTRY 3 cr.

Prerequisite: Chem 232.

Study of the applications of chemistry and sicence to the industries of western Pennsylvania for the science teacher. Course consists of lectures, laboratory work, and field trips to representative industries. Two hours lecture, 3 hours laboratory per week.

Chem 303 GLASSBLOWING TECHNIQUES 1 cr.

Designed to introduce the science student to the techniques necessary for the construction and modification of scientific glass apparatus. Limited to junior and senior science majors and others by permission of instructor. Two hours instruction per week, with additional practice at student's convenience.

Chem 305-306 NEW APPROACHES TO TEACHING HIGH SCHOOL CHEMISTRY I AND II 3 cr. each

Prerequisite: at least junior chemistry education major.
Designed to acquaint the teacher and prospective teacher with the Chemical Bond Approach (CBA) curriculum and Chemical Education Material Study (CHEM Study) curriculum. Laboratory work is emphasized. Students should plan to take prior to student teaching.

Chem 321 QUANTITATIVE ANALYSIS 4 cr.

Prerequisite: Chem 112 or Chem 114.
Theory and practice of quantitative analysis, including gravimetric and volumetric analysis; special emphasis on perfecting the student's laboratory technique and application of general chemical knowledge through problem solving. Three hours lecture, 4 hours laboratory per week.

Chem 322 INSTRUMENTAL ANALYSIS 4 cr.

Prerequisite: Chem 321.
Designed to instruct the student in modern instrumental methods of chemical analysis. Student learns the theory behind the instrument, the principles of operation, interpretation of the data obtained, and the limitations of the methods. Three hours lecture, 4 hours laboratory per week.

Chem 323 ANALYTICAL METHODS 4 cr.

Prerequisite: Chem 112 and non-chemistry major.
Principles of precipitation, acid-base, and oxidation-reduction, equilibria are applied to problem solving and to laboratory determinations; instrumental methods of analysis, such as colorimetry, atomic absorption and flame emission, gas chromatography, etc. Three hours lecture, 4 hours laboratory per week.

Chem 331 ORGANIC QUALITATIVE ANALYSIS 3 cr.

Prerequisites: Chem 231-232 (Chem 232 may be taken concurrently).
Designed to give the student experience in the systematic identification of various classes of organic compounds by both chemical and physical methods. One hour lecture, 6 hours laboratory per week.

Chem 333 ORGANIC MECHANISMS AND STEREOCHEMISTRY 3 cr.

Prerequisites: Chem 232 and 341.
Topics covered include a review of stereochemical principles, conformational analysis, methods by which reaction mechanisms are studied and an introduction to molecular orbital theory. Three hours lecture per week.

Chem 341 PHYSICAL CHEMISTRY I 4 cr.

Prerequisites: Math 015, 019, or 113 and Physics 112 or 132; Chem 112 or 114.

Chemical thermodynamics with applications to solutions, phase and chemical equilibria-kinetic theory. Four hours lecture per week.

Chem 342 PHYSICAL CHEMISTRY II 3 cr.

Prerequisite: Chem 341.

Study of solids, liquids, surfaces, chemical kinetics, electrochemistry, atomic and molecular structure. Three hours lecture per week.

Chem 343 PHYSICAL CHEMISTRY LABORATORY I 1 cr.

Prerequisites: Chem 321, 341.

Experiments illustrating the application of fundamental laws to actual systems. Three hours laboratory per week.

Chem 344 PHYSICAL CHEMISTRY LABORATORY II 1 cr.

Prerequisite: Chem 343.

Extension of Physical Chemistry Laboratory I; experiments related to chemical kinetics, molecular spectroscopy and other topics of physical chemistry. Three hours laboratory per week.

Chem 351 BIOCHEMISTRY 4 cr.

Prerequisite: Chem 231.

Study of the chemistry of carbohydrates, liquids, proteins, minerals, vitamins, and hormones and the biological functions of each. Four hours lecture per week.

Chem 355 BIOCHEMISTRY AND NUTRITION 3 cr.

Prerequisite: Chem 102.

Course designed for the Home Economics major; studies the chemistry and biological function of biologically active compounds with respect to nutritional requirements. Three hours lecture per week.

Chem 411 INORGANIC CHEMISTRY 3 cr.

Prerequisite: Chem 341.

Designed to give the student an understanding of the advanced theories of atomic structure, chemical bonding, acids and bases, coordination compounds, and selected topics. Three hours lecture per week.

Chem 412 INORGANIC PREPARATIONS 3 cr.

Prerequisites: Chem 321 and Chem 411.

Lectures include discussion of the descriptive chemistry of the elements according to their periodicity; laboratory is an investigation of the synthesis, purification, and characterization of inorganic substances. One hour lecture, 6 hours laboratory per week.

Chem 421 ADVANCED INSTRUMENTAL ANALYSIS 3 cr.

Prerequisite: Chem 322.

Study of modern chemical analysis, using advanced instrumental techniques; emphasis on theory, principles of operation, capabilities, and limitations of the advanced analytical instruments used. One hour lecture, 6 hours laboratory per week.

Chem 441 ADVANCED PHYSICAL CHEMISTRY 3 cr.

Prerequisite or Co-requisite: Chem 342.

Study of the fundamental ideas of quantum and statistical mechanics, molecular structure, and other topics of current interest. Three hours lecture per week.

Chem 498 PROBLEMS IN CHEMISTRY 1 to 2 cr.

Prerequisite: Permission of Chairman.

Course of independent study on selected problems, including laboratory work, library reading, and conferences with a staff member. A minimum of 4 hours per week required per credit.

Sci 105 PHYSICAL SCIENCE I 4 cr.

See course description in Physics Department. This course is not a prerequisite for Physical Science II.

Sci 106 PHYSICAL SCIENCE II 4 cr.

Deisgned to fulfill the University science requirement for non-science majors. This semester will survey the fields of chemistry and geology. This course may be taken prior to Sci. 105. Three hours lecture, 2 hours laboratory per week.

Sci 111 SCIENCE IN MODERN CIVILIZATION 3 cr.

Designed to acquaint the non-science major with some of the major discoveries of science and to develop an awareness of how science affects our lives. Three hours lecture per week.

COMPUTER SCIENCE DEPARTMENT

HOWARD E. TOMPKINS, CHAIRMAN; BUTERBAUGH, CHELLAPPA, MAPLE

A Bachelor of Science degree program in Computer Science is in the final planning and approval stages. This program is under the School of Arts and Sciences. Students should consult the Department Chairman or adviser for advice on courses and scheduling.

COURSE DESCRIPTIONS

CSci 110 INTRODUCTION TO COMPUTER SCIENCE 3 cr.

Basic configuration of computers; problem analysis and solution with one or more algorithmic languages. Three hours lecture per week.

CSci 200 INTRODUCTION TO COMPUTERS 3 cr.

A "computer appreciation" course for non-science majors; brief survey of computer organization, flowcharting, programming; discussion of political, economic, psychological and technical effects of computers on society. Three hours lecture per week.

CSci 220 APPLIED COMPUTER PROGRAMMING LANGUAGES 3 cr.

Prerequisite: CSci 110, Bus 339 or consent of instructor.
Study of the procedure-oriented programming languages and techniques used in a variety of applications, including COBOL, FORTRAN, BASIC, & PL/I: documentation standards. Three hours lecture per week.

CSci 250 INTRODUCTION TO NUMERICAL METHODS 3 cr.

Prerequisites: CSci 110 and Math 015, 019, or 113.
Algorithmic methods for finding functional values, roots of equations, solutions to systems of equations, performing matrix operations, curve fitting, interpolation, numerical integration and differentiation; errors in computation; programming solutions in an algorithmic language. Three hours lecture per week.

CSci 300 ASSEMBLY LANGUAGE PROGRAMMING 3 cr.

Prerequisite: CSci 220 or Bus 339 or consent of instructor.
Examination of structure and languages of machines; representation of data, addressing techniques, symbolic coding, assemblers, macros, etc.; problem solution using assembly language. Three hours lecture per week.

CSci 340 DATA STRUCTURES AND NON-NUMERIC PROCESSING 3 cr.

Prerequisite: CSci 300.

Basic concepts of data; storage systems and structures; lists, arrays, strings; hashing techniques; searching and sorting techniques; data structures in programming languages; string processing. Three hours lecture per week.

CSci 490 SPECIAL TOPICS IN COMPUTER SCIENCE 3 cr.

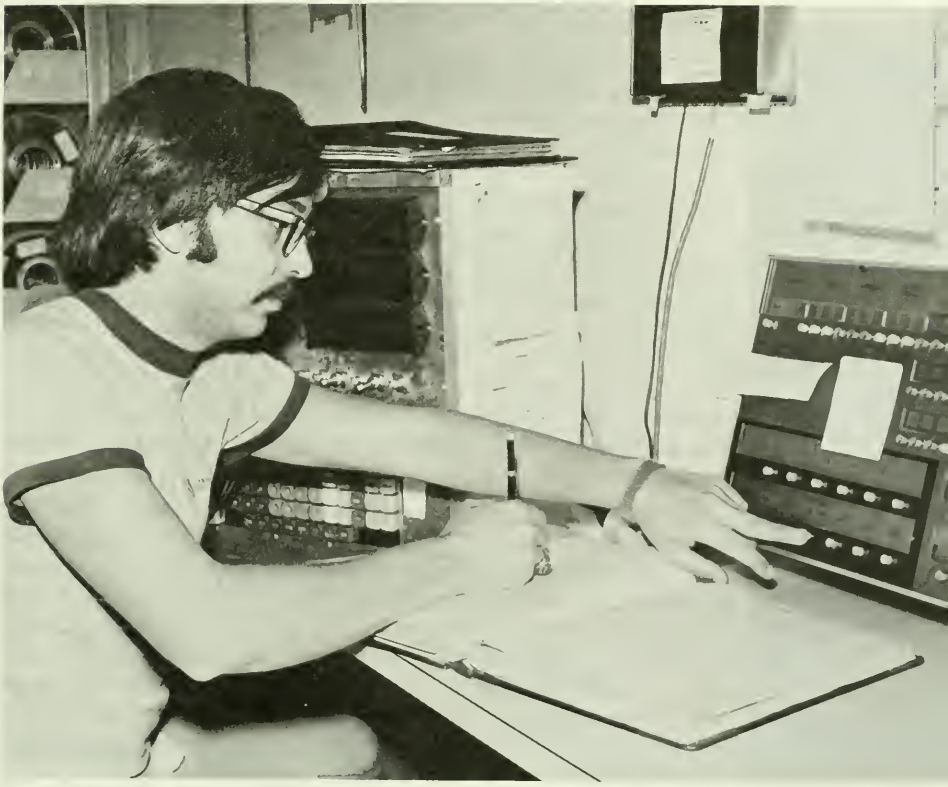
Prerequisite: 12 credits in Computer Science and consent of instructor.

Seminar in advanced topics of Computer Science; content will vary, depending on interests of instructor and students. May be repeated for additional credit.

CSci 495 SPECIAL PROBLEMS IN COMPUTER SCIENCE 1-4 cr.

Prerequisite: 12 credits in Computer Science and consent of instructor.

Study of special problems in Computer Science under the direction of a faculty adviser.



CRIMINOLOGY DEPARTMENT

WILLIAM F. WEGENER, CHAIRMAN; BOGAN, BROWN, COHEN, McGUIRE, McNABB, SHANNON, STENGER

The Department of Criminology offers men and women who seek a career in the Criminology field a professional education program supported by a broad liberal arts education. The degree offered is the Bachelor of Arts degree with a major in Criminology, under the School of Arts and Sciences; also available are a Two-year Academic Diploma and a minor in Criminology.

The program in Criminology has a five-fold objective:

1. The education of students for employment and leadership in the expanding field of criminal justice.
2. The education of presently employed law enforcement and correctional officers who recognize the need for raising their educational level.
3. The instruction of students who wish to acquire an understanding of the processes of criminal justice as a cultural part of their higher education.
4. The instruction of students who wish to prepare for graduate study and research in the administration of justice.
5. A curriculum that provides an excellent foundation for students preparing for a career in law.

Nearly every level of government offers opportunities for professional careers in criminology. Employment opportunities normally exist in more than 50 Federal agencies, including the Federal Bureau of Investigation, U.S. Secret Service, Bureau of Narcotics, Intelligence Division (IRS), Inspection Service (IRS), Alcohol Tobacco Tax Division (IRS), State Department Security, Atomic Energy Commission, and military investigative branches.

Both men and women will find employment opportunities in parole and probation work for Federal, state, and local governments, institutional careers concerned with the custody and treatment of juveniles and adults at all levels of government. In addition, many police departments have specialized units dealing with juveniles, community relations, training and research. Criminalistic laboratories provide another career area, and there are a wide variety of opportunities in traffic administration, investigative and security activities in the commercial and industrial fields.

Career opportunities are available also in research and teaching at the college and university level and in research divisions of agencies in the field of administration of justice.

CURRICULA

Core Program

Criminology 101 and 102, 3 credits each, are prerequisites for all other Criminology courses. Requirements for all Criminology programs include these two courses and 6 more credits in Criminology, as follows:

Crmn 101	– General Administration of Justice	3 cr.
Crmn 102	– Criminology	3 cr.
Crmn 301	– Criminal Law I	3 cr.
Crmn 302	– Criminal Law II	3 cr.

B.A. in Criminology

In addition to the Core Program, requirements for the degree of Bachelor of Arts in Criminology are 18 more hours in Criminology, as follows:

Crmn 490	– Crime in Modern Society	3 cr.
Crmn Electives		15 cr.

Two-Year Academic Diploma in Criminology

For officers and students taking this program in Criminology, requirements in addition to the Core Program are 18 more credits in Criminology, 6 credits in English, 3 credits in Sociology, 3 credits in Psychology, 3 credits in Political Science, 15 credits of electives in the Social Sciences division, as follows:

Criminology

The following are suggested, but substitutions may be permitted, depending on circumstances:

Crmn 201	– Police Administration I	3 cr.
Crmn 202	– Police Administration II	3 cr.
Crmn 310	– Criminal Investigation	3 cr.
Crmn 340	– Crime Prevention	3 cr.
Crmn 350	– Techniques of Interviewing	3 cr.
Crmn 415	– Supervision in the Administration of Justice	3 cr.

English

Eng 101	– English I	3 cr.

Eng 102 — English II 3 cr.

Psychology
Psy 201 — General Psychology 3 cr.

Political Science
PolS 111 — American Politics 3 cr.

Sociology
Soc 151 — Introduction to Sociology 3 cr.

Electives
Any of the Social Sciences 15 cr.

Minor in Criminology

The minor in Criminology consists of a minimum of 18 credits, consisting of the Core Program plus the following:

Crmn 490 — Crime in Modern Society 3 cr.
Criminology Electives 3 or more cr.

COURSE DESCRIPTIONS

Crmn 101 GENERAL ADMINISTRATION OF JUSTICE 3 cr.
Administration of criminal justice in the United States. Deals with the role of the police, courts, and the correctional process.

Crmn 102 CRIMINOLOGY 3 cr.
Prerequisite: Crmn 101.
General survey of the nature and causes of crime and its prevention and treatment.

Crmn 201 POLICE ADMINISTRATION I 3 cr.
Prerequisite: Crmn 102.
Analysis of the organizational structure, administrative practices, and operating procedures of law enforcement agencies.

Crmn 202 POLICE ADMINISTRATION II 3 cr.
Prerequisite: Crmn 201.
Continuation of Police Administration I, with special emphasis on staff functions, such as records, communications, training, personnel administration, and finance.

Crmn 301 CRIMINAL LAW I 3 cr.
Prerequisites: Crmn 101 and 102.
A formal study of specific crimes as found in common law and in state and local codes.

Crmn 302 CRIMINAL LAW II 3 cr.
Prerequisite: Crmn 301.
Detailed study of the legal procedures through which the accused passes. Laws of arrest, search and seizure, with a discussion of important case law. Analysis of safeguards established for the protection of individual liberties, especially as found in the

application of rules governing the introduction and use of information in formalized legal proceedings.

Crmn 310 CRIMINAL INVESTIGATION 3 cr.

The theory and practice of investigation; discussion of the various types of information obtainable from persons and things; application of investigative theory to crime and accidents.

Crmn 311 CRIMINALISTICS 3 cr.

Prerequisite: Crmn 310.

The application of scientific crime detection methods; emphasis on the collection, preservation, and interpretation of physical evidence found in connection with a crime. Two hours lecture, and 3 hours laboratory per week.

Crmn 320 TRAFFIC ADMINISTRATION I 3 cr.

Origin and growth of the traffic problem; fundamentals of engineering, education, and enforcement; organization and functions of the police traffic division and related agencies; traffic laws and traffic courts.

Crmn 325 INSTRUMENTAL DETECTION OF DECEPTION 3 cr.

Prerequisite: Crmn 350.

Devices for measuring emotional responses to verbal stimuli; psychological and physiological aspects of deception; analysis of detection of deception techniques and their application to law enforcement. Two hours lecture, and 3 hours laboratory per week.

Crmn 330 PLANNING AND RESEARCH 3 cr.

Prerequisites: Crmn 101 and 102.

The role of planning and research in contemporary law enforcement; analysis of the planning process and the nature of planning with emphasis on planning for special events and situations.

Crmn 340 CRIME PREVENTION 3 cr.

Organization and function of crime prevention agencies; problems and techniques in the prevention of crime; community resources in preventing crime.

Crmn 350 TECHNIQUES OF INTERVIEWING 3 cr.

Consideration of the nature, methods, and principles of interviewing; emphasis on role playing in interviewing situations.

Crmn 360 COMMERCIAL AND INDUSTRIAL SECURITY 3 cr.

Plant protection and industrial security; merchandising safety and security; credit and insurance investigative procedures.

Crmn 370 COMMUNITY RELATIONS 3 cr.

The role of law enforcement agencies in modern day society; police-community relations units, human relations resources, civil

rights and professionalism in law enforcement.

Crmn 410 QUESTIONED DOCUMENT ANALYSIS 3 cr.

Evaluation and identification of questioned documents; admissibility as evidence, preparation and presentation in court. Two hours lecture, and 3 hours laboratory per week.

Crmn 411 ADVANCED CRIMINALISTICS 3 cr.

Prerequisite: Crmn 311.

Ballistics, serology, narcotics, poisons, firearms identification, chromatography, alcohol tests, and hair identification. Two hours lecture, and 3 hours laboratory per week.

Crmn 415 SUPERVISION IN THE ADMINISTRATION OF JUSTICE 3 cr.

Consideration of supervisory problems in the field of administration of justice; emphasis on such topics as leadership, motivation, morale, discipline, public relations, communications, decision-making, and the training functions.

Crmn 420 TRAFFIC REGULATION AND CONTROL 3 cr.

Organization for traffic control, accident investigation, traffic flow pattern, high accident frequency locations, signs, signals, and simple engineering remedial actions. Traffic safety research.

Crmn 425 ADVANCED INSTRUMENTAL DETECTION OF DECEPTION 3 cr.

Prerequisite: Crmn 325.

Special techniques in detection of deception, including: Backster techniques, Keeler technique, Modified Backster technique, and the Integrated Control Question technique. Statistical chart interpretation. Polygraph research. Two hours lecture, 3 hours laboratory per week.

Crmn 430 COMPARATIVE STUDY OF JUSTICE 3 cr.

Comparison of the American system of administration of justice with those of other nations, including developed and underdeveloped countries.

Crmn 431 ETIOLOGY OF DELINQUENT BEHAVIOR 3 cr.

Analysis of the aberrant behavior of children and youth in terms of modern behavioral sciences; personality and social factors examined with a view toward developing prevention and control procedures.

Crmn 432 TREATMENT AND CONTROL OF DELINQUENCY 3 cr.

Analysis of juvenile court procedures, juvenile probation, juvenile institutions, and juvenile parole in the treatment and control of delinquency.

Crmn 440 INSTITUTIONAL TREATMENT OF THE OFFENDER 3 cr.

Modern philosophy and methods in the treatment of adult criminals and juvenile delinquents in correctional institutions.

Crmn 445 NON-INSTITUTIONAL TREATMENT OF THE OFFENDER 3 cr.

Analysis of principles and practices in probation and parole; case method; techniques of supervision.

Crmn 460 INDUSTRIAL SECURITY AND SAFETY 3 cr.

Administration of fire and accident prevention programs; government security programs; document control, security clearances, and visitor control; special problems and hazards.

Crmn 490 CRIME IN MODERN SOCIETY 3 cr.

Analysis of the nature and extent of crime at the state, national, and international levels of government; consideration of special problems in metropolitan areas, organized crime, the professional criminal and white-collar crime; crime control in a democratic society.

Crmn 492 CORRECTIONAL ADMINISTRATION 3 cr.

Administration of juvenile and adult probation and parole programs, and correctional institutions; emphasis on the special problems encountered in the field.

Crmn 495 SEMINAR IN ADMINISTRATION OF JUSTICE 3 cr.

Study of problems in the administration of justice; reports based upon original investigation; reviews of recent books and periodical literature; topics of current interest. Enrollment limited.

Crmn 497 INTERNSHIP 12 cr.

Prerequisite: 18 credits in Criminology.
A practicum designed to broaden the educational experience of students through appropriate observational and work assignments with governmental agencies and private firms. Offered during the summer only. By appointment only.

Crmn 498 SUPERVISED PROFESSIONAL EXPERIENCE 6 cr.

Prerequisite: 18 credits in Criminology.
A practicum designed for full-time police officers who attended the FBI Academy and/or Pennsylvania State Police Academy. By Departmental approval only.

Crmn 499 SPECIAL PROBLEMS 1-4cr.

Prerequisite: 15 credits in Criminology.
Individual research under the direction of the staff. This course may be taken more than once for credit. By appointment only.

ECONOMICS DEPARTMENT

DONALD A. WALKER, CHAIRMAN; CROSS, DAVIS, GARVIN, HOLT, HUFF, MARTEL, RICHARD, STONEBRAKER, WARE

The Economics Department offers courses to meet the needs of IUP students in three general areas: a program that prepares students majoring in Economics for graduate school or immediate employment; a program that prepares Indiana students to teach Economics on the high school level; and a program that enables students majoring in other Departments to take courses in Economics.

Degrees offered are the Bachelor of Arts in Economics and the Bachelor of Science in Education with a major in Social Sciences, concentrating on Economics.

CURRICULA

The program for Economics majors is designed for those who intend to pursue careers as economists in education, government, industry, finance, or commerce. The economist in today's world occupies an increasingly important position and great opportunity exists for qualified people.

Economics 101, BASIC ECONOMICS, may be taken in partial fulfillment of the Social Sciences segment of the University's General Education requirement. Economics 101 should not be programmed by Economics majors or minors, by students enrolled in the Business School, or by students in the School of Education who are contemplating teaching social science on the high school level. Instead, Economics 121, PRINCIPLES OF ECONOMICS I, should be substituted, as this course serves as a foundation for many advanced Economics courses and should be programmed by all students who wish to take such courses.

Students majoring in other fields are welcome to choose Economics courses among the upper-division electives. These courses are designed to aid the student in developing sophisticated insight into economic issues and are valuable in many ways, regardless of the student's ultimate vocation.

It is recommended that the Economics major take a

minor in one of the other Social Sciences, in Business (Business Management, General Business, Accounting), or in Mathematics. A minor in Mathematics is strongly recommended for those whose future may include graduate work in Economics.

Core Program.

Requirements for ALL Economics majors and minors are 6 credits in Economics, as follows:

Econ 121	Principles of Economics I	3 cr.
Econ 122	Principles of Economics II	3 cr.

B.A. in Economics

In addition to the Core Program, requirements for the degree of Bachelor of Arts in Economics are 21 more credits in Economics, as follows:

Econ 421	Macroeconomic Analysis	3 cr.
Econ 422	Microeconomic Analysis	3 cr.
Economics electives		15 cr.

B.S. in Education (Economics Concentrate)

In addition to the Core Program requirements for the degree of Bachelor of Science in Education with a major in Social Sciences, concentrating in Economics, are 9 more credits of Economics electives, excluding Economics 101.

Minor in Economics

To minor in Economics, the student must take 9 credits of Economics electives in addition to the Core Program, excluding Economics 101 as a possible elective.

Concentrations in Economics

The Department of Economics offers several concentrations in particular aspects of Economics. The concentrations are designed to equip students with the education and skills that will enable them to obtain a position in government or private business upon completion of the undergraduate degree. The Department provides verification that students have completed a concentration, and they may also have the information recorded on their transcripts. These concentrations are not restricted to

Economics Majors. The concentrations available at present are:

Competition and Public Policy
Labor Economics
Managerial Economics
Economics of State and Local Government
Quantitative Economics

Detailed information regarding these concentrations may be obtained from the Department Chairman.

COURSE DESCRIPTIONS

Econ 101 BASIC ECONOMICS 3 cr.

Study of how man makes a living, individually and collectively, with particular reference to our own economic system. For those who do not plan to take more than 3 credits of Economics.

Econ 121 PRINCIPLES OF ECONOMICS I 3 cr.

Nature and methodology of economics; mixed capitalism and the market economy; national income; employment theory, including the economics of fiscal policy; money, banking, and the Federal Reserve System; economic growth.

Econ 122 PRINCIPLES OF ECONOMICS II 3 cr.

Economics of the firm; theory of consumer demand; determination of price and output in different market structures; the distribution of income; foreign trade and the balance of payments.

Econ 241 CONTEMPORARY ECONOMIC ISSUES 3 cr.

Examination of relevant and important problematic aspects of the U.S. and of the world economy, including a rigorous but non-technical analysis of the problem, and a formulation and evaluation of possible corrective policies.

Econ 305 MATHEMATICS FOR ECONOMISTS 3 cr.

Elements of algebra and calculus necessary to enable students to grasp the mathematical foundations of economic theory and statistical research, with examples taken from economic theory and data.

Econ 306 MATHEMATICAL ECONOMICS 3 cr.

Prerequisite: Econ 305 or its mathematical equivalent.
The application of mathematical methods to microeconomics and macroeconomics, and an introduction to linear programming.

Econ 320 HISTORY OF ECONOMIC THOUGHT 3 cr.

Prerequisite: Econ 121 or 122.
Examination of the social, political, intellectual, and economic origins of the work of the more prominent past economists, and of the content and impact of their work.

Econ 325 MONETARY ECONOMICS I 3 cr.

Prerequisite: Econ 121.

Organization, operation, and economic significance of U.S. monetary insitutions; commercial banks and the Federal Reserve System; survey of monetary theory and policy; the mechanism of international payments.

Econ 326 MONETARY ECONOMICS II 3 cr.

Prerequisite: Econ 325.

Detailed study of monetary theory; tasks of central banking; principal objectives of monetary policy; intensive study of recent monetary experience; complementary and competing aims of monetary and fiscal policy.

Econ 330 LABOR ECONOMICS 3 cr.

Prerequisites: Econ 121 and 122.

History, structure, and operations of trade unions and employer organizations; major Federal labor legislation; collective bargaining theory; wage determination; current labor problems.

Econ 331 ECONOMIC ORGANIZATION OF INDUSTRY 3 cr.

Prerequisite: Econ 122 or permission of the instructor.

Social effectiveness of industries analyzed through measures of market structure, market conduct, and market performance.

Econ 332 GOVERNMENT AND BUSINESS 3 cr.

Prerequisite: Econ 122 or permission of the instructor.

Formal and informal methods used to maintain, supplement, and moderate competition as well as regulation as a substitute for competition.

Econ 333 REGULATION OF INDUSTRY 3 cr.

Prerequisites: Econ 121 and 122.

Examines the theory and practice of regulation, emphasizing the effects of regulation on economic performance and efficiency in the U.S.

Econ 334 ECONOMICS OF CORPORATE DECISIONS 3 cr.

Prerequisites: Econ 121 and 122.

Applies economic theory to corporate decision making. Topics include corporate objectives, profit maximization, economic measurement and forecasting.

Econ 335 PUBLIC FINANCE 3 cr.

Prerequisites: Econ 121 and 122.

Taxation and expenditure theory at the Federal level; Federal budget and debt considerations; public sector impact upon the economy; intergovernmental fiscal relations.

Econ 336 STATE AND LOCAL FINANCE 3 cr.

Analysis of the character and impact of state and local government revenue sources, expenditures, and fiscal systems.

Econ 339 ECONOMIC DEVELOPMENT I 3 cr.

Prerequisite: Econ 121.

Theory of growth; the theory of the economic development of underdeveloped countries.

Econ 340 ECONOMIC DEVELOPMENT II 3 cr.

Prerequisite: Econ 121.

Application of the theory of growth and the analysis of economic development of selected economies; empirical and econometric studies of underdeveloped countries and their economic institutions.

Econ 341 HISTORY OF THE ECONOMIC DEVELOPMENT OF THE UNITED STATES 3 cr.

Prerequisite: Econ 121.

Examination of main patterns of the United States' economic growth since the end of the eighteenth century; emphasizes economic development as a laboratory for economic analysis.

Econ 342 HISTORY OF THE ECONOMIC DEVELOPMENT OF MODERN EUROPE 3 cr.

Prerequisite: Econ 121.

Study of the dynamic forces that have contributed to the development of modern Europe; industrial revolution in England; industrialization on the continent; impact of Europe on the world economy.

Econ 343 ECONOMICS OF HUMAN RESOURCES 3 cr.

Prerequisite: Econ 121 or permission of the instructor.

Inquiry into economic, demographic, and related factors affecting the growth, structure, and distribution of an economy's population.

Econ 345 INTERNATIONAL ECONOMICS I 3 cr.

Prerequisite: Econ 121.

Theory of international trade; analysis of the balance of payments; international economic equilibrium; the mechanism of international economic and monetary adjustments.

Econ 346 INTERNATIONAL ECONOMICS II 3 cr.

Prerequisite: Econ 345.

Application of the theory of international trade to empirical data and problems; historical survey and examination of current problems of international trade; the institutional setting of international trade.

Econ 350 COMPARATIVE ECONOMIC SYSTEMS 3 cr.

Prerequisite: Econ 121.

Capitalism, socialism, and communism subjected to economic analysis; their principles, practices, institutions and philosophies.

Econ 351 SOVIET ECONOMY 3 cr.

Prerequisite: Econ 121 or 122.

Thorough study of the operations of the Soviet economy. The course will compare and contrast the workings of the Soviet economy with other Communist countries.

Econ 355 QUANTITATIVE ECONOMICS 3 cr.

An introduction to economic statistics. Material is covered regarding empirical frequency distributions, probability distributions of random variables, and functions of random variables, and tests of economic hypotheses.

Econ 356 INTRODUCTION TO ECONOMETRICS 3 cr.

Prerequisite: Econ 355 or its equivalent.

An introduction to econometrics. Interest centers upon linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations.

Econ 360 SEMINAR: SPECIAL STUDIES IN ECONOMICS 3 cr.

Prerequisite: Permission of the instructor.

Seminar in selected economic issues or problems.

Econ 371 ECONOMICS OF LABOR LEGISLATION 3 cr.

Prerequisite: Econ 330.

Economic background and effects of governmental regulation of labor relations, with emphasis on a detailed examination of the National Labor Relations Act as amended.

Econ 372 ECONOMICS OF WAGES AND EMPLOYMENT 3 cr.

Prerequisite: Econ 330.

Analysis of wages and employment under various market structures. Also, the analysis of the impact of labor market forces on wages, prices, and distributive shares.

Econ 381 REGIONAL ECONOMICS 3 cr.

Prerequisite: Three credit hours in Economics.

The process of regional economic growth, location theory, basic techniques of regional analysis, public and private area development programs.

Econ 382 URBAN ECONOMICS 3 cr.

Prerequisite: Three credit hours in Economics.

Structure of the urban economy, goals, processes, problems, and policy in urban economic development.

Econ 390 HONORS IN ECONOMICS 3 cr.

Readings, conferences, and reports arranged for students who have demonstrated proficiency in economics. Research work may be directed toward theoretical or applied economic problems.

Econ 421 MACROECONOMIC ANALYSIS 3 cr.

Prerequisites: Econ 121 and 122.

Income and employment analysis; national income accounts and theory; classical, Keynesian, and post-Keynesian models; investment, growth, and inflation theory; the role of government in our economy.

Econ 422 MICROECONOMIC ANALYSIS 3 cr.

Prerequisites: Econ 121 and 122.

Consumer behavior, theory of the firm, market structures, distribution, general equilibrium analysis, applications to current problems of economic policy.

ENGLISH DEPARTMENT

CRAIG G. SWAUGER, CHAIRMAN; ANDERSON, BECK, BETTS, BOYER, J. BRIGHT, L. BRIGHT, BROWN, COMO, COMPTON, COOK, CRAIG, CUREY, J. DAVIS, DAY, DeGEORGE, EISEN, ENSLEY, FORCE, FREUND, FRITZ, GOURLEY, GRAY, GRAYBURN, J. GREEN, GRUBB, HALDEMAN, HAYWARD, HAZLEY, HEIMER, HULL, L. IANNI, R.G. JOHNSON, KRASZEWSKI, KRUPNIK, LUCKER, C. MAHAN, MALKIN, D. McCLURE, McMANMON, L. MILLER, NANIA, NIX, M. OMRCANIN, RAY, RIDER, R. ROFFMAN, ROUMM, RUFFNER, SAMSEY, SEACRIST, SEINFELT, R. SHAFER, C. SHAFFER, H. SMITH, SWIGART, R.L. THOMAS, TRUBY, WADDELL, H. WARREN, WATTA, WELDY, WILSON, WOODWORTH, YARUP, YOUNG.

One goal of the English program is to contribute to the general language proficiencies of all its students. These proficiencies include the ability to express oneself comprehensibly and clearly in written language, to speak distinctly, tastefully and meaningfully in oral language, and to appreciate, understand and draw sustenance from both long-recognized and recently produced literary and dramatic achievements in the English language. In its programs, the English Department attempts to prepare its majors for careers in the teaching of English at the secondary school level and for careers of all types where skill in communication and a conviction in favor of humane values are considered an appropriate background for the performance of assigned duties and responsibilities.

Degrees offered by the English Department are the Bachelor of Arts in English or in Speech and Theater and the Bachelor of Science in Education with an English major. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education. In addition, an English minor is available in the School of Arts and Sciences.

CURRICULA

Special Requirements

In meeting the University's General Education requirements, English majors in both the School of Education and the School of Arts and Sciences are REQUIRED to replace Eng 201, English III, with Eng 202, Introduction to Literary Analysis. It is recommended that this course be taken during the sophomore year, as early as possible in

the major program. Also, ALL English majors, in both the School of Education and the School of Arts and Sciences, MUST complete the intermediate sequence of a foreign language. This may be done in one of three ways: by examination, by earning credit in the third and fourth semesters of a foreign language, or by completing four semesters of a new language. If the last procedure is used, the two beginning foreign language courses may be applied as free electives to the total number of credits needed for graduation.

Speech and Theater majors are required to spend at least one summer in the Summer Theater Workshop.

English majors in the School of Arts and Sciences may not use professional education courses as free electives toward the 124 hours for graduation.

B. A. in English

The candidate for the degree of Bachelor of Arts in English usually chooses this program because he wishes a broad undergraduate education in liberal studies. He may intend to prepare for graduate study in English for eventual college teaching or for other non-academic professions. This program does not lead to certification in secondary English.

In addition to the General Education requirement for English majors (English 101, 102, and 202), requirements for the degree of Bachelor of Arts in English are 30 more credits in English selected from the list herein. All courses listed give 3 credits except English 390, which gives 3 or 6 credits. The English major also may select a minor of at least 15 hours in any one of several fields, such as history, philosophy, psychology, or foreign languages.

Eng 120 — Newspaper Reporting
Eng 105 — Journalism and the Mass Media
Eng 206 — The Nature of Drama
Eng 208 — The Art of the Film
Eng 220 — Advanced Composition
or
Eng 221 — Creative Writing
or
Eng 222 — Journalistic Writing
Eng 223 — Photojournalism
Eng 230 — History of the English Language
Eng 240 — Classical Literature in Translation
Eng 246 — Contemporary Short Fiction
Eng 247 — Poetry and Its Forms
Eng 305 — Modern Drama
Eng 321 — Feature Writing
Eng 323 — Editing and Management

Eng 330 – Structure of English
Eng 331 – Trends in Linguistics
Eng 340 – European Literature From the Renaissance to the Twentieth Century
Eng 341 – Modern European Literature
Eng 345 – Criticism of Contemporary Writing
Eng 346 – Contemporary American and British Poetry
Eng 350 – American Literature to 1865
Eng 351 – American Literature From 1865 to 1915
Eng 352 – American Literature From 1915 to 1945
Eng 358 – Modern American Fiction
Eng 359 – Black American Literature
Eng 360 – Old and Middle English Literature
Eng 361 – Chaucer
Eng 362 – English Drama to the Restoration
Eng 365 – 16th Century Prose and Poetry
Eng 366 – Shakespeare
Eng 369 – 17th Century Prose and Poetry
Eng 370 – Milton
Eng 371 – The English Bible as Literature
Eng 373 – Restoration and 18th Century Drama
Eng 375 – The Augustans
Eng 376 – The Age of Johnson
Eng 377 – The Rise of the English Novel
Eng 379 – The Romantic Movement
Eng 380 – Victorian Literature
Eng 381 – 19th Century English Novel
Eng 383 – The English Novel; Conrad to the Present
Eng 385 – The English Essayists
Eng 390 – Literary Britain: Tour
Eng 400 – Seminar: Studies in English and American Literature

Minor in English

To minor in English, 15 credits in English are required beyond the General Education requirement of English 101, English 102, and English 201.

B. A. in Speech and Theater

In addition to the General Education requirement for English majors (English 101, 102, and 202), requirements for the degree of Bachelor of Arts in Speech and Theater are 30 more credits in English selected from the following list. All courses listed give 3 credits.

The major in Speech and Theater is required to spend at least one summer in The Summer Theater Workshop during the Pre-Session and Main Session of the summer school. Also, the major in Speech and Theater may elect a

minor of at least 15 hours in another field.

Eng 205 — The Dramatic Arts
Eng 206 — The Nature of Drama
Eng 208 — The Art of the Film
Eng 211 — History of the Theater
Eng 215 — Creative Dramatics and Storytelling
Eng 305 — Modern Drama
Eng 310 — Oral Interpretation
Eng 311 — Public Speaking
Eng 312 — Summer Theater Workshop
Eng 315 — Fundamentals of Acting
Eng 316 — Directing and Play Production
Eng 317 — Costume and Make-Up
Eng 318 — Stagecraft
Eng 319 — Scenic Design and Lighting
Eng 320 — Advanced Acting
Eng 322 — Playwriting
Eng 362 — English Drama to the Restoration
Eng 366 — Shakespeare
Eng 373 — Restoration and 18th Century Drama

B. S. in Education (English Major)

In addition to the General Education requirements for English majors (English 101, 102, and 202), requirements for the degree of Bachelor of Science in Education with an English major are a minimum of 36 more credits in English, in order to satisfy the requirements for certification. Since English majors do not take a minor, many of them augment the minimal 36-credit program with courses that will prepare them for graduate study in their profession of secondary English teaching.

Of these 36 credits, 9 are in required courses, and the remainder may be selected from those listed as follows, of which a maximum of 12 credits may be in journalism, speech, or dramatics courses. Also required is Education 452. All the English courses give 3 credits except English 390, which gives 3 or 6 credits.

Required:

Eng 220 — Advanced Composition (Eng 221 or Eng 222 may be substituted)
Eng 230 — History of the English Language
Eng 330 — The Structure of English
ED 452 — The Teaching of English and Speech (not counted in the 36 hours for the major)

English Electives:

Eng 102 — Newspaper Reporting
Eng 105 — Journalism and the Mass Media
Eng 205 — The Dramatic Arts
Eng 206 — The Nature of Drama
Eng 208 — The Art of the Film
Eng 223 — Photojournalism
Eng 240 — Classical Literature in Translation
Eng 245 — Literature for

Adolescents
Eng 246 — Contemporary Short Fiction
Eng 247 — Poetry and Its Forms
Eng 305 — Modern Drama
Eng 310 — Oral Interpretation
Eng 311 — Public Speaking
Eng 321 — Feature Writing
Eng 323 — Editing and Management
Eng 331 — Trends in Linguistics
Eng 340 — European Literature From the Renaissance to the Twentieth Century
Eng 341 — Modern European Literature
Eng 345 — Criticism of Contemporary Writing
Eng 346 — Contemporary American and British Poetry
Eng 350 — American Literature to 1865
Eng 351 — American Literature From 1865 to 1915
Eng 352 — American Literature From 1915 to 1945
Eng 358 — Modern American Fiction
Eng 359 — Black American Literature
Eng 360 — Old and Middle English Literature
Eng 361 — Chaucer
Eng 362 — English Drama to the Restoration
Eng 365 — 16th Century Prose and Poetry
Eng 366 — Shakespeare
Eng 369 — 17th Century Prose and Poetry
Eng 370 — Milton
Eng 371 — The English Bible as Literature
Eng 373 — Restoration and 18th Century Drama
Eng 375 — The Augustans
Eng 376 — The Age of Johnson
Eng 377 — The Rise of the English Novel
Eng 379 — The Romantic Movement
Eng 380 — Victorian Literature
Eng 381 — 19th Century English Novel
Eng 383 — The English Novel: Conrad to the Present
Eng 385 — The English Essayists
Eng 390 — Literary Britain: Tour
Eng 400 — Seminar: Studies in English and American Literature

B.S. in Education (Communication Major)

This major leads to a teaching certificate in communication in the secondary school. The major takes a basic program covering literature, language, composition, speech, theater, and media and selects one or more specialties from the following: literature, linguistic science, writing, speech, theater.

Details of the Communication Major are not available in this Bulletin. However, the English Department can furnish complete information. Please consult the English Department chairman.

COURSE DESCRIPTIONS

Eng 101 ENGLISH I 4 cr.

Should be taken the first semester at the University. Course uses readings in the nature and history of language, semantic and linguistic analysis, and problems in rhetoric. Seven theme-length expository papers are written during the semester, in addition to shorter exercises and a written final examination. Three hour lecture, 1 hour individual instructor-student conference.

Eng 102 ENGLISH II 3 cr.

Prerequisite: Eng 101.
Analytical reading of various types of nonfictional prose, aimed at enunciating both meaning and the techniques by which meaning is manifested. The writing in the course consists of three substantial documented papers.

Eng 103 INTRODUCTION TO THEATER 3 cr.

Explores the place of the theater in the life of man, with critical appreciation of the various arts and skills involved; emphasis on the creative function of the audience.

Eng 105 JOURNALISM AND THE MASS MEDIA 3 cr.

A critical examination of the roles-goals of newspapers, magazines, radio and television as they affect American society socially, politically, and economically.

Eng 120 NEWSPAPER REPORTING 3 cr.

Open to first-year and second-year students in any Department who either work or aspire to work on the University newspaper staff; includes instruction in writing the news story, preparing copy, interviewing, covering special events and similar reporting activities.

Eng 201 ENGLISH III 3 cr.

Prerequisites: Eng 101 and 102.
Focuses on analysis of an imaginative literature. The writing consists of two substantial critical papers on themes generated by the reading.

Eng 202 INTRODUCTION TO LITERARY ANALYSIS 3 cr.

Offers beginning English majors opportunities to study examples of the various approaches to works of literary art and requires them to practice such approaches through writing at least three critical papers.

Eng 205 THE DRAMATIC ARTS 3 cr.

Deals with the basic problems that confront a director of plays in high school. The course studies the principles of play selection, rehearsal procedures, scenic demands, and all other aspects pertinent to a successful production.

Eng 206 THE NATURE OF DRAMA 3 cr.

Study of selected plays of various styles and periods, to gain greater understanding and appreciation of the art of drama.

Eng 208 THE ART OF THE FILM 3 cr.

Concentrate on the film as an artistic medium. Eight to twelve motion pictures are shown during the semester and are analyzed in class discussions.

Eng 211 HISTORY OF THE THEATER 3 cr.

Study of the development of the theater, with special emphasis on important plays, people, theaters and technical innovations.

Eng 215 CREATIVE DRAMATICS AND STORY TELLING 3 cr.

Through workshop experiences, stresses creative dramatics as a way of teaching for adults, a way of learning for children in both the elementary and secondary schools.

Eng 220 ADVANCED COMPOSITION 3 cr.

Primarily seeks to improve writing style, particularly in the more utilitarian forms, such as the magazine article and the personal essay.

Eng 221 CREATIVE WRITING 3 cr.

Prerequisite for admission to this course is demonstrated ability and interest in creative writing; may be substituted for Eng 220. This is a seminar course in which the kinds of writing done are chosen in line with the special interests and abilities of each student.

Eng 222 JOURNALISTIC WRITING 3 cr.

Emphasis on intelligent use of writing ability in a journalistic style, and understanding of the "why" of journalism and mass media. May be substituted for Eng 220.

Eng 223 PHOTOJOURNALISM 3 cr.

Introduction to still photography for the news media. Includes preparation of portfolio and learning of specialized processing techniques for high-speed work.

Eng 230 THE HISTORY OF THE ENGLISH LANGUAGE 3 cr.

Studies historical development of the English language, as a basis for a better understanding of modern American English.

Eng 240 CLASSICAL LITERATURE IN TRANSLATION 3 cr.

The masterpieces studied range from those of ancient Greece to the Middle Ages. English literature and American literature are excluded.

Eng 245 LITERATURE FOR ADOLESCENTS 3 cr.

Surveys the poetry, drama and fiction with which the adolescent is familiar through his school work and his personal reading.

Eng 246 CONTEMPORARY SHORT FICTION 3 cr.

Attention is given to the form, the structure, and the art of the modern short story, British, American, and Continental.

Eng 247 POETRY AND ITS FORMS 3 cr.

Offers a study in the appreciation of poetry, with special attention to the technique of the poet and the structure of poetry.

Eng 305 MODERN DRAMA 3 cr.

The reading of plays starts with Ibsen and other Scandinavian dramatists, followed by plays by outstanding Continental, British, and American playwrights.

Eng 310 ORAL INTERPRETATION 3 cr.

Emphasizes the understanding and appreciation of literature through developing skill in reading aloud.

Eng 311 PUBLIC SPEAKING 3 cr.

Fundamental principles of public speaking, audience analysis, interest and attention, selection and organization of speech material.

Eng 312 SUMMER THEATER WORKSHOP 3-6 cr.

A theater practicum offering credit for practical experience in Theater by the Grove, the university's semi-professional summer repertory theater.

Eng 315 FUNDAMENTALS OF ACTING 3 cr.

Gives attention to theory and practice in the techniques of acting.

Eng 316 DIRECTION AND PLAY PRODUCTION 3 cr.

Affords each student the opportunity to select, cast, rehearse, and produce a one-act play.

Eng 317 COSTUME AND MAKE-UP 3 cr.

Deals with the practical application of straight and character make-up; emphasis on costuming to show how mood and illusion can be created through proper selection of style, color, and texture of materials.

Eng 318 STAGECRAFT 3 cr.

Study and practice in all aspects of backstage technical craft.

Eng 319 SCENIC DESIGN AND LIGHTING 3 cr.

Prerequisite: At least one course in dramatic literature and some experience in stagecraft.
Theories and techniques of designing and lighting stage settings make up this course.

Eng 320 ADVANCED ACTING 3 cr.

Prerequisite: Eng 315.
The course involves study and practice in the problems of period and style acting.

Eng 321 FEATURE WRITING 3 cr.

Designed for the student who might work in journalism or who might wish to write on a part-time or free-lance basis.

Eng 322 PLAYWRITING 3 cr.

Prerequisites: One course in dramatic literature, and consent of instructor.

A course providing time, place, advice and intelligent criticism for those interested in writing for the stage.

Eng 323 EDITING AND MANAGEMENT 3 cr.

Focuses on the concepts, practices, and techniques of editing the writing of others. Attention given to the process of advancement to management positions in journalism.

Eng 330 THE STRUCTURE OF ENGLISH 3 cr.

Training in the analysis of the American-English Language, with structural and generative approaches to the system of grammar emphasized. This course is a prerequisite for Ed 452, Teaching of English and Speech in the Secondary School.

Eng 331 TRENDS IN LINGUISTICS 3 cr.

Explores recent developments in linguistic theory and research.

Eng 340 EUROPEAN LITERATURE FROM THE RENAISSANCE TO THE TWENTIETH CENTURY 3 cr.

Consists of selected European works from the Renaissance to the twentieth century representing all major genres with the exception of the epic.

Eng 341 MODERN EUROPEAN LITERATURE 3 cr.

Consists of selected Continental fiction concerned with alienated man and the quest for identity in the intellectual climate of pluralism and changing values.

Eng 345 CRITICISM OF CONTEMPORARY WRITING 3 cr.

Covers the basic texts of literary criticism and relates the development of critical concepts to the work of influential literary critics of the twentieth century. Not open to freshmen and sophomores.

Eng 346 CONTEMPORARY AMERICAN AND BRITISH POETRY 3 cr.

Study of British and American poetry since World War II.

Eng 350 AMERICAN LITERATURE TO 1865 3 cr.

Provides a study of major American writers from colonial times to the Civil War.

Eng 351 AMERICAN LITERATURE FROM 1865 TO 1915 3 cr.

Emphasis on in-depth study of the masterpieces of American literary Realism and Naturalism, in both fiction and poetry.

Eng 352 AMERICAN LITERATURE FROM 1915 TO 1945 3 cr.

Provides a study of major writers and major works in American literature between World War I and World War II.

Eng 358 MODERN AMERICAN FICTION 3 cr.

Major American writers of fiction since 1945 are considered in this course.

Eng 359 BLACK AMERICAN LITERATURE 3 cr.

Analyzes significant Black American literature of a variety of types – autobiography, essay, fiction, poetry.

Eng 360 OLD & MIDDLE ENGLISH LITERATURE 3 cr.

The study of Old English includes a reading of both prose and poetry, whereas the reading in Middle English is limited to major works of poetry, excluding Chaucer's.

Eng 361 CHAUCER 3 cr.

Studies Chaucer, his life, his language, the development of his literary style and his art, with and through his major poetical works.

Eng 362 ENGLISH DRAMA TO THE RESTORATION 3 cr.

Traces the development of English drama from 900 A.D. to the closing of the theaters in 1642, but does not include the plays of Shakespeare.

Eng 365 SIXTEENTH-CENTURY PROSE & POETRY 3 cr.

Covers English literature from the late Middle Ages to the High Renaissance.

Eng 366 SHAKESPEARE 3 cr.

Studies Shakespeare's development as a poetic dramatist against the background of the Elizabethan stage; examines the audience, textual problems, language imagery, and philosophy.

Eng 369 SEVENTEENTH-CENTURY PROSE & POETRY 3 cr.

Covers English Literature from the death of Elizabeth to 1660; examines the work of such poets as Donne, Jonson, Herbert, and Marvell, and such prose stylists as Bacon, Burton, and Browne.

Eng 370 MILTON 3 cr.

Consists of a close reading of the English poems of John Milton, with particular attention to *Paradise Lost* and *Samson Agonistes.*

Eng 371 THE ENGLISH BIBLE AS LITERATURE 3 cr.

Considers the literary aspects of the English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of the King James Bible upon the writers and speakers of modern English.

Eng 373 RESTORATION & 18th CENTURY DRAMA 3 cr.

Emphasizing the critical theory and social implication of English drama from 1660-1780, concentrates on the great comedies of manners of Etherege, Congrave, Wycherly, and Sheridan.

Eng 375 THE AUGUSTANS 3 cr.

Examines in some detail the major poems of Dryden and Pope,

the major prose of Swift, Addison and Steele, and selected works of a few minor writers.

Eng 376 THE AGE OF JOHNSON 3 cr.

Emphasizes the art and criticism of Samuel Johnson, as revealed in his writings and Boswell's *Life*.

Eng 377 RISE OF THE ENGLISH NOVEL 3 cr.

Surveys the development of the English novel from its forerunners through the fiction of the Gothic romanticists and Jane Austen.

Eng 379 THE ROMANTIC MOVEMENT 3 cr.

Examines basic tenets of Romantic philosophy in the major writings of the period from 1780-1832 – poetry, the essay, and fiction.

Eng 380 VICTORIAN LITERATURE 3 cr.

Examines essays, novels, and poetry of the second half of the nineteenth century, with special consideration of the criticism they offer of political, economic, social, and religious practices and creeds of Victorian England.

Eng 381 NINETEENTH CENTURY ENGLISH NOVEL 3 cr.

Traces the historical and technical development of the novel from Scott to Hardy.

Eng 383 THE ENGLISH NOVEL: CONRAD TO THE PRESENT 3 cr.

Covers important twentieth century novels – including works by Conrad, Lawrence and Joyce – from about 1900 to recent times.

Eng 385 THE ENGLISH ESSAYISTS 3 cr.

Considers major essayists, both as members of and influences on the society of their time.

Eng 390 LITERARY TOUR: BRITAIN 3 cr. or 6 cr.

Offered each summer, either for 3 weeks during Pre-Session or for 6 weeks during Main Session. Visits London, Stratford, and Cambridge or Oxford, as well as other places important in English literature.

Eng 400 SEMINAR: STUDIES IN ENGLISH & AMERICAN LITERATURE 3 cr.

Independent readings in English or American literature under the direction of appropriate faculty members. By permission of instructor only.

Ed 452 TEACHING OF ENGLISH & SPEECH IN THE SECONDARY SCHOOL 3 cr.

Prerequisite: Eng 330.
This course is in turn a prerequisite to student teaching in English. Introduces the student to current professional practices in the teaching of English in high school.

FOREIGN LANGUAGES

Foreign language study is offered by two Departments: the Department of Germanic and Slavic Languages and the Department of Romance and Classical Languages. Available are majors in French, German, Latin, Russian, and Spanish, as well as elementary and intermediate Greek.

Those who major in one of these languages will acquire an active skill in all phases of that language, will enter more deeply into its history, culture, and literature, and will gain some knowledge of its linguistic development throughout the centuries. Students who specialize in a language are destined for careers in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students who choose the secondary schools for their careers as teachers will find the close supervision and advanced methodology offered by the Departments a distinct asset. Students also may elect to do further graduate work in their language, thereby preparing themselves for a career in college teaching or enhancing their high school teaching careers.

Degrees offered are the Bachelor of Arts in the selected language, the Bachelor of Science in Education in the selected language, and the Master of Education in Spanish. In addition to major concentrations, an 18-credit sequence may be chosen for the area of concentration required for a degree in Elementary Education, or a 21-credit sequence to satisfy the requirements for a minor. Both Arts and Sciences and Education students in Romance and Classical Languages are required to take Hist 101-102, History of Civilization I, II.

General Education Language Requirements

Students in the School of Arts and Sciences, who must pass a second year language course (FL 251 and 252) as one of the School's requirements for graduation, may choose any one of the six languages offered. The 6 credits for these courses are part of the General Education requirement. The student with no previous foreign language study will take FL 151-152 (3 credits each) as prerequisites; the credits will not be applicable to any School

or Department requirements, but may be counted as free electives in the total required for graduation. Generally, the student should program in accordance with previous school or practical background according to the schedule:

1 year of high school, or equivalent, equals	FL 151
2 years of high school, or equivalent, equals	FL 152
3 years of high school, or equivalent, equals	FL 251
4 years of high school, or equivalent, equals	FL 252

Individual placement may be requested by the student, in which case the pertinent factors regarding preparation will be weighed by the Department, with the student's individual requirements and the judgment of classroom instructors also being considered.

CURRICULA

Core Program

Basic requirements for all majors and minors in any foreign language are credits for Foreign Language I and II (FL 151 and 152) and Oral Practice I and II (FL 051 and 052). For students wishing to major in Latin, Greek 151 and 152 are substituted for FL 051 and 052. These credits may be obtained by course work at the University, or by advanced placement owing to previous high school or other work in the language or special examination.

B. A. in the Specified Language

The requirement for the degree of Bachelor of Arts in the specified language is 36 credits in the chosen language above the first year level, as follows:

Foreign Language	
FL 251-252 – Language III and IV	6 credits
FL 053-054 – Oral Practice*	4 credits
FL 351-352 – Advanced Language I and II	6 credits
FL 055-056 – Advanced Oral Practice I and II*	2 credits
FL 361-362 – Development of Culture and Literature I and II	6 credits
FL Electives	12 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

The language major who takes first-year courses FL 151-152 should take FL 051-052 concurrently.

B. S. in Education (Foreign Language Major)

The requirement for the degree of Bachelor of Science in Education with a foreign language major is a minimum of 33 credits in the major language above the first year level and, in addition, 3 credits in the Teaching of Foreign Language in the Secondary School (Ed 453), for a total of 36 credits. Also, a proficiency examination in the major language chosen and a semester of supervised student teaching is necessary before certification is granted.

Foreign Language

FL 251-252 – Language III and IV	6 credits
FL 053-054 – Oral Practice*	4 credits
FL 351-352 – Advanced Language I and II	6 credits
FL 055-056 – Advanced Oral Practice I and II*	2 credits
FL 361-362 – Development of Culture and Literature I and II	6 credits
FL Electives	9 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

Education

Ed 453 – Teaching of Foreign Language in the Secondary School	3 credits

An Education language major may be certified in a second language, if he wishes, by taking the following sequence:

FL 251-252	6 credits
FL 053-054*	4 credits
FL 351-352	6 credits
FL 055-056*	2 credits
FL 361-362	6 credits

A student in Elementary Education may elect a concentration of 18 hours of a foreign language, consisting of the following:

FL 251-252	6 credits
FL 053-054*	4 credits
FL 351-352	6 credits
FL 055-056*	2 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

Minor in Foreign Language

A minor in a foreign language consists of 21 credits, as follows:

FL 251-252	6 credits
FL 053-054*	4 credits
FL 351-352	6 credits
FL 055-056*	2 credits
FL 361	3 credits

*Students majoring in Latin will replace FL 053 and 054 with Greek 251 and 252 and omit the FL 055 and 056 requirement.

DEPARTMENT OF GERMANIC AND SLAVIC LANGUAGES

KENNETH W. BRODE, CHAIRMAN; FRIES, OMRCANIN, ROFFMAN, SOMMER, VOELKER, R. N. WILLIAMS, JR.

COURSE DESCRIPTIONS

German and Russian Courses

Ger 151-152 GERMAN I AND II 3 cr. each
Rus 151-152 RUSSIAN I AND II

Designed for the beginning student who will complete a two semester course only. Basic syntax and simple, functional vocabularly are stressed, using texts containing reading materials based on the culture of the language areas involved.

Ger 051-052 ORAL PRACTICE I AND II 2 cr. each
Rus 051-052 ORAL PRACTICE I AND II

Using the lab approach and a lab-type class paralleling the above courses, stressing pattern drills, phonetics, exact pronunciation, and oral composition.

Ger 251-252 GERMAN III AND IV 3 cr. each
Rus 251-252 RUSSIAN III AND IV

Designed primarily for students with 1 year of college or 2-3 years of high school (or equivalent) background, this course reviews grammar, utilizing texts based on a cultural approach to the study of a people and their language.

Ger 053-054 ORAL PRACTICE III AND IV 2 cr. each
Rus 053-054 ORAL PRACTICE III AND IV

Taken by majors to continue the development of previous skills, these courses parallel 251 and 252.

Elective Courses in German

Ger 253 INTERMEDIATE COMPOSITION AND CONVERSATION 3 cr.

Usually reserved for the main summer session, requires a minimum of 1 year of college German, and represents an intensive approach.

Ger 256 SCIENTIFIC GERMAN 3 cr.

Designed to substitute for German 252 and will be offered in the second semester. Primarily for science majors, it may be taken as an elective by German majors.

Ger 291 SPECIAL PROJECTS IN THE GERMAN LANGUAGE 1-3 cr.

A seminar-type course, open to an individual or group interested in an intensive investigation of a particular area of linguistics (diachronic, synchronic linguistics, etc.)

Ger 351-352 ADVANCED GERMAN LANGUAGE I AND II 3 cr. each

Reviews and supplements the skills derived from earlier courses, taught in German using single language texts, hence preparing the student for future studies in grammar and stylistics.

Ger 055-056 ADVANCED ORAL PRACTICE 1 cr. each

Relatively informal courses, supplementing the preceding sequence. Designed to increase speaking ability, the courses involve discussions of cultural differences between countries. The largely unstructured approach permits repeating of these courses.

Ger 361-362 DEVELOPMENT OF GERMAN CULTURE AND LITERATURE 3 cr. each

Examines the historical and cultural aspects of the countries involved, reviews their characteristic contributions throughout the centuries, and analyzes the relationship of each literary movement to the age that produced it.

Ger 363-364 INTRODUCTION TO GERMAN LITERATURE I AND II 3 cr. each

Selected readings in German poetry, drama, and fiction, to acquaint the student with some techniques for intelligent understanding and formal criticism of works of literature.

Ger 367 NINETEENTH CENTURY GERMAN LITERATURE 3 cr.

Ger 368 TWENTIETH CENTURY GERMAN LITERATURE 3 cr.

Ger 369 CONTEMPORARY GERMAN LITERATURE 3 cr.

Ger 370 THE AGE OF GOETHE I AND II 3-6 cr.

Ger 391 SPECIAL PROJECTS IN GERMAN LITERATURE 1-3 cr.

Devoted to a special aspect or figure of German literature, this semester-type course may be arranged on an individual or group basis.

Ed 453 TEACHING OF FOREIGN LANGUAGE IN THE SECONDARY SCHOOL 3 cr.

Prerequisite: Successful completion of the sequence 351-352 and 055-056 in the student's major language; passing a language proficiency examination, or permission of the instructor.

Elective Courses in Russian

Rus 351-352 ADVANCED RUSSIAN LANGUAGE I AND II 3 cr. each

Conducted entirely in Russian for students with 2 years of college Russian, advanced grammar, composition, reading, and oral self-expression on a variety of topics.

Rus 055-056 ADVANCED ORAL PRACTICE I AND II 1 cr. each

For students with 2 years of college Russian, advanced oral expression on readings, current events and more abstract themes.

Rus 361-362 DEVELOPMENT OF RUSSIAN CULTURE AND LITERATURE I AND II 3 cr. each

Readings, discussions and lectures in Russian on the course of Russian civilization; open to students with 2 years of college Russian or the equivalent.

Rus 367-368 NINETEENTH CENTURY RUSSIAN LITERATURE I AND II 3-6 cr.

Reading selections from masterpieces of 19th century Russian fiction; reports, discussions, compositions, and analysis of language; conducted entirely in Russian.

Rus 369-370 TWENTIETH CENTURY RUSSIAN LITERATURE 3-6 cr.

Analysis of the contemporary Russian language as used by various Soviet writers in fiction and periodical literature; conducted entirely in Russian. Students will do independent reading of Soviet novels in English.

Rus 371 RUSSIAN POETRY 3 cr.

Reading of selected lyric poets of the 19th and 20th centuries, with particular emphasis on the development of modern Russian; conducted entirely in Russian.

Rus 372 RUSSIAN DRAMA 3 cr.

Reading and listening to selected plays of the 19th and 20th centuries in an attempt to understand and master the idiom of conversational Russian; conducted entirely in Russian.

DEPARTMENT OF ROMANCE AND CLASSICAL LANGUAGES

CHARLES W. FAUST, CHAIRMAN; CARRANZA, CORD, DRESCHER, FISEL, A. M. GUARDIOLA, A. P. GUARDIOLA, HENNINGER, HENRY, ISAR, JONES, LANDIS, LEONE, LOZADA, MENDIZABAL, MILTZ, OP DE BEECK, PHILLIPS, SHIELDS, SORENTO, SPIEKER, WHITMER.

COURSE DESCRIPTIONS

French, Greek, Latin and Spanish Courses

Fr 151-152	FRENCH I AND II	3 cr. each
Grk 151-152	GREEK I AND II	3 cr. each
Lat 151-152	LATIN I AND II	3 cr. each
Sp 151-152	SPANISH I AND II	3 cr. each

For the beginning student and fulfills the requirement for a two-semester course; pronunciation, reading, oral and written communication are its objectives. Majors should take 051-052 concurrently with 151 and 152.

Fr 051-052	ORAL PRACTICE I AND II	2 cr. each
Sp 051-052	ORAL PRACTICE III AND IV	2 cr. each

Stresses pronunciation and automatic response through constant basic drill. Two hours weekly oral practice in small groups.

Fr 251-252	FRENCH III AND IV	3 cr. each
Grk 251-252	GREEK III AND IV	3 cr. each
Lat 251-252	LATIN III AND IV	3 cr. each
Sp 251-252	SPANISH III AND IV	3 cr. each

Prerequisite: A 151-152 sequence or the equivalent.
Continues training in the basic skills stated above, with the addition of a study of authors and cultural materials. Majors should take 053-054 concurrently.

Fr 053-054	ORAL PRACTICE III AND IV	2 cr. each
Sp 053-054	ORAL PRACTICE III AND IV	2 cr. each

Continuation of 051-052, and carries the oral skills to a higher level. Must be taken concurrently with sequence 251-252.

Fr 351-352	ADVANCED FRENCH LANGUAGE I AND II	3 cr. each
Lat 351-352	ADVANCED LATIN LANGUAGE I AND II	3 cr. each
Sp 351-352	ADVANCED SPANISH LANGUAGE I AND II	3 cr. each

Reviews grammar in depth and presents a systematic analysis of the structure of the language; frequent original themes required.

Fr 055-056	ADVANCED ORAL PRACTICE I AND II	1 cr. each

Sp 055-056	ADVANCED ORAL PRACTICE I AND II	1 cr. each

Informal advanced conversation courses which the language major must take concurrently with 351-352. Class meets twice weekly.

Sp 361-362	DEVELOPMENT OF SPANISH CULTURE AND LITERATURE I AND II	3 cr. each
Fr 361-362	DEVELOPMENT OF FRENCH CULTURE AND LITERATURE I AND II	3 cr. each
Sp 363-364	DEVELOPMENT OF SPANISH-AMERICAN CULTURE AND LITERATURE I AND II	3 cr. each

Examines the historical and cultural aspects of the countries involved, reviews their characteristic contributions over the centuries, and analyzes the relationship of each literary school to the moment which produced it.

Elective Courses in French

Fr 253	INTERMEDIATE COMPOSITION AND CONVERSATION	3 cr.

Prerequisite: One year of college French.
Given according to demand and staff availability.

Fr 291	SPECIAL PROJECTS I	1-3 cr.
Fr 391	SPECIAL PROJECTS II	1-3 cr.

Intended to meet the special needs of an individual or a group as they may arise.

Fr 363	MEDIEVAL AND RENAISSANCE LITERATURE	3 cr.
Fr 365	SEVENTEENTH CENTURY FRENCH LITERATURE	3 cr.
Fr 366	EIGHTEENTH CENTURY FRENCH LITERATURE	3 cr.
Fr 367	NINETEENTH CENTURY FRENCH LITERATURE	3 cr.
Fr 368	TWENTIETH CENTURY FRENCH LITERATURE	3 cr.

Designed to present general surveys of the literature of the respective periods, with due consideration to the social factors and events behind them.

Fr 371	THE FRENCH NOVEL	3 cr.

Elective survey of the origin and development of the French Novel. A selected list of works representative of the major forms are read in their entirety.

Fr 372	STUDIES IN CONTEMPORARY FRENCH LITERATURE	3 cr.

Content of this course will vary in accordance with the needs and interests of those who elect it.

Fr 461 STRUCTURES OF FRENCH AND ENGLISH 3 cr.

Modern methods of linguistic analysis applied to a study of French syntax; transformational, distributional and traditional models serve to explain the mechanisms of the language with a pedagogical intent.

Elective Courses in Latin

Lat 361 DEVELOPMENT OF ROMAN CULTURE AND LITERATURE 3 cr.

Lat 362 LATIN CONVERSATION AND COMPOSITION 3 cr.

Aims at the ability to speak Latin on a conversational level and to write grammatically correct Latin prose.

Lat 371-372 SURVEY OF LATIN LITERATURE I AND II 3 cr.

This course sequence will give a comprehensive view of Latin literature from Ennius to the Middle Ages.

Elective Courses in Spanish

Sp 253 INTERMEDIATE COMPOSITION AND CONVERSATION 3 cr.

Prerequisite: One year college Spanish.
Given according to demand and staff availability.

Sp 291 SPECIAL PROJECTS I 1-3 cr.
Sp 391 SPECIAL PROJECTS II 1-3 cr.

Designed to meet the special need of an individual or a group as they may arise.

Sp 365 SPANISH LITERATURE BEFORE 1650 3 cr.
Sp 367 NINETEENTH CENTURY SPANISH LITERATURE 3 cr.
Sp 368 TWENTIETH CENTURY SPANISH LITERATURE 3 cr.

Present general surveys of the literature of the respective periods, with due consideration to the social factors and events behind them.

Sp 370 GOLDEN AGE DRAMA 3 cr.

Traces the development of the Spanish theater and examines its artistic and spiritual flowering in the Baroque period.

Sp 371 THE SPANISH NOVEL 3 cr.

After a brief survey of the origins and trends of the Spanish novel, major stress is given to the Nineteenth Century Novel and the Generation of 98.

Sp 376 SPANISH-AMERICAN LITERATURE 3 cr.

Following a consideration of the salient tendencies of Spanish-American Literature, this course may take the form of a comprehensive survey, or it may concentrate its attention upon the novel of social thesis.

Sp 390 SPANISH IN THE ELEMENTARY SCHOOL 3 cr.

Prerequisite: Spanish 251-252 or equivalent.
The prospective teacher of Spanish on the elementary level is introduced to materials suitable for Grades 1 through 6. Preparation of games, songs, poems, and story telling are included.

Linguistics

Fl 421 LANGUAGE AND SOCIETY 3 cr.

In this course, the student considers salient facts of language and its role in society and culture. Language families, linguistic change, and reciprocal influences of culture and language are presented.

Education

Ed 453 TEACHING OF FOREIGN LANGUAGES IN THE SECONDARY SCHOOL 3 cr.

Prerequisite: Successful completion of 351-352 and 055-056 in the student's major language; passage of a language proficiency examination or permission of the instructor.
Methods and material for secondary school teaching, current theories and techniques, and illustrative units are studied. One period per week spent in study of the use of the language laboratory.

GEOGRAPHY AND REGIONAL PLANNING DEPARTMENT

THOMAS G. GAULT, CHAIRMAN; BALLAS, BASILE, CHAMBERS, HEIDEN, KULKARNI, MILLER, PAYNE, TEPPER, WALTERS, WEBER, WINSLOW, WOOD, ZACUR.

The function and purpose of geography is to prepare the future citizen to make rational judgments in his private and public life as it relates to the use of natural and cultural resources. Geography also acts as a meaningful integrator of the many subject-matter areas taken by the student.

Though geography is listed as social science in Arts and Sciences curricula, it is of broader scope. Geography includes physical geography (earth science), cultural geography, economic geography, urban and regional planning, or combines these for a broad understanding of man in his total environment.

Vocational opportunities in geography are good. Students will find a wide variety of positions in government service, marketing, urban and regional planning, armed forces map services, editorial positions, and business.

Three programs for a major are offered by the Geography Department: (1) the Bachelor of Arts in Urban Geography and Planning, (2) the Bachelor of Arts in General Geography (Physical, Regional, Urban, or Cultural-Economic), and (3) the Bachelor of Science in Education with a major in Social Sciences, concentrating on Geography. The first two degree programs are under the School of Arts and Sciences, and the third is under the School of Education.

Note: As of March 6, 1973 the Curriculum Committee approved a change in the name of this department from "Geography Department" to "Geography and Regional Planning Department" and gave approval to a B.S. degree program in Regional Planning and to a 21 hour minor in Regional Planning. For further information on these programs, see the department chairman.

CURRICULA

B. A. Programs in Geography

A student desiring a Bachelor of Arts degree in Geography may elect either of two programs: Program I — General Geography (specializing in Cultural-Economic Geography, Physical Geography, Urban Geography and Planning, or Regional Geography); or Program II — Urban Geography and Planning.

In either case, requirements for the major are 36 credits in Geography, of which 18 credits must be taken as follows:

B. A. Core Program

Ge 149	Economic Geography	3 cr.
Ge 154	Cultural Geography	3 cr.
Ge 240	Climatology I	3 cr.
Ge 246	Physiography	3 cr.
Ge 251	Geography of United States and Canada	3 cr.
Ge 491	Geography Thought and Philosophy	3 cr.

Also, all majors are required to make one extended field trip and attend one professional conference. A semester fee of $5.00 is charged to apply toward the field trip cost.

Program I: General Geography

In addition to the 18 Geography credits required in the Core Program, 18 more credits must be elected in Geography.

It is suggested that the student concentrate his electives as grouped for a specialization in the section on Course Descriptions.

Program II: Urban Geography and Planning.

This is a professional program for Urban/Regional Planning employment. In addition to the 18 Geography credits required in the Core Program, 18 more credits are required, as follows:

Ge 255	Cartography	3 cr.
Ge 455	Historical Geography of Cities and City Planning	3 cr.
Ge 456	General City Planning	3 cr.
Ge 457	Urban Design	3 cr.
Ge 458	Urban Planning Basic Studies and Analysis	3 cr.
Ge Elective		3 cr.

B. S. in Education (Geography Concentrate)

Requirements for the degree of Bachelor of Science in Education with a major in Social Sciences, concentrating on Geography are a minimum of 15 credits in Geography as follows (department recommends 24 s.h. in the concentration):

Ge 101	World Geography	3 cr.
Ge 149	Economic Geography	3 cr.
	or	
Ge 355	Urban Geography	3 cr.
Ge 240	Climatology	3 cr.
	or	
Ge 246	Physiography	3 cr.
Ge 251	Geography of United States and Canada	3 cr.
Regional Geography Electives		6 cr.
Geography Electives		6 cr.

NOTE: Ge 101 helps to fulfill the University's General Education requirement. Also, all concentrates are required to make one extended field trip and attend one professional conference. A semester fee of $5.00 is charged to apply toward the field trip cost.

Minor in Geography

A minor consists of 15 credits of Geography course work, including that taken as General Education. Although a student may elect any combination of the courses listed below, the Department encourages one of the following concentrations: (1) Core Program for Arts and Sciences (suggested for those anticipating graduate work in geography); (2) Physical Geography (suggested for Geo-Science majors); (3) Regional Geography; (4) Cultural-Economic Geography (suggested for Business, Economics, or Sociology majors); or (5) Urban Geography and Urban/Regional Planning (suggested for Sociology, Economics, or Political Science majors).

COURSE DESCRIPTIONS

Cultural — Economic Geography

Ge 101 WORLD GEOGRAPHY 3 cr.

Understanding and appreciation of man's interrelationship with the earth, accomplished through the study of physical, cultural, economic, and demographic factors.

Ge 149 ECONOMIC GEOGRAPHY 3 cr.

Designed to promote geographic and economic concepts, methods, and skills pertinent to understanding of the spatial variation of production, consumption, and exchange over the earth's surface.

Ge 154 CULTURAL GEOGRAPHY 3 cr.

May be taken in lieu of Geog 101. Course considers the relationship of various ethnic and cultural groups to the natural environment. Student is acquainted with the tools, philosophy, and literature of cultural geography and related disciplines.

Ge 253 GEOGRAPHY AND SOCIETY 3 cr.

Prerequisite: 3 cr. Ge.
Designed for elementary and secondary school social science teachers. Concepts such as: spatial arrangement, areal change, earth for support of man, urbanization, biophysical relationships with society, interdependency, the chorological organization of knowledge.

Ge 353 GEOGRAPHIC INFLUENCES IN HISTORY 3 cr.

Prerequisite: 3 cr. Ge.
Studies the relationships of the natural environmental factors to the settlement, development, and progress of selected countries — with major emphasis on the United States.

Ge 354 TRADE AND TRANSPORTATION 3 cr.

Embraces analysis, theory, and application techniques; treatment includes trade patterns, place theory, statistics and models; circulation, accessibility, time, and distance concepts.

Ge 453 POLITICAL GEOGRAPHY 3 cr.

Prerequisites: 6 cr. Ge and 6 cr. Soc Sci or permission.
Considers the evolution of the nation-state and a systems-analytic view of the geography of international disputes and the political geography of the United States.

Ge 454 CONTEMPORARY ISSUES IN GEOGRAPHY 3 cr.

Prerequisites: 6 cr. Ge and 6 cr. Soc Sci.
A study of contemporary problems: boundary questions, world trade, world food resources, control and development of natural resources, settlement population problems, etc. Course will vary in topics offered.

Ge 461 REGIONAL FIELD STUDIES 1-3 cr.

Prerequisite: 12 cr. Ge.
These trips, which involve the study of a selected area through the agencies of travel and actual investigation, are arranged from time to time to suit the needs of the student group.

Ge 491 GEOGRAPHY THOUGHT AND PHILOSOPHY 3 cr.

Prerequisite: 12 cr. Ge.
Seminar, required, limited to junior or senior Geography majors. Seminar in history of the discipline, great ideas, leading problems, and unresolved issure.

Ge 492 GEOGRAPHY HONORS 3 cr.

Prerequisite: 18 cr. Ge and 3 QPA in Ge.
Independent research under faculty direction, by application only.

Ge 493 GEOGRAPHY HIGH HONORS 3 cr.

Prerequisite: Ge 492.
Extension of Ge 492. Admission is by invitation only to those who have completed Ge 492.

Physical Geography

Ge 153 PHYSICAL GEOGRAPHY 3 cr.

Introduces natural factors of the landscape, weather, climate, soils, rocks, minerals, structure of the earth's crust, the oceans; and tools of geography: globes, maps, aerial photographs.

Ge 240 CLIMATOLOGY I 3 cr.

Studies the elements of weather and climate, and the climatic regions of the earth; understanding and application are underscored in the laboratory. (Spring semester only.)

Ge 241 CLIMATOLOGY II 3 cr.

Prerequisite: Ge 240 or Meteorology.
Physical aspects of climatology: heat and water budget, climatic classifications, paleo-climates, regional climates, micro-climates, climatic change, statistical and mathematical models.

Ge 246 PHYSIOGRAPHY 3 cr.

Studies the form of the earth's crust and its associated water bodies; classification, distribution, and processes involved in their geomorphological development and their effects upon the human landscape. (Fall semester only.)

Ge 255 CARTOGRAPHY 3 cr.

Gives an understanding of the compilation and use of maps and develops an ability to construct economic and geographic maps. Use of aerial photographs is treated briefly.

Ge 422 AEROSPACE SCIENCE 3 cr.

Treats of the atmosphere and space environment; flight problems; satellites and space probes; manned orbital and space exploration projects. Problems of teaching and bibliography will be considered. (Non-majors only). (Summer Pre-Session only.)

Ge 452 CONSERVATION – RESOURCE USE 3 cr.

Prerequisite: 9 cr. Ge.
Conservation of natural and human resources, regional understanding, planning, utilization, evaluation, field work, workshop activities, projects.

Ge 462 FIELD TECHNIQUES IN GEOGRAPHY 1-3 cr.

Prerequisite: 12 cr. Ge or permission.
Proposes to give experience in the study of land utilization and use of geographic tools and techniques of the field.

Ge 490 MAP AND PHOTO INTERPRETATION 3 cr.

Maps and aerial photographs, along with remote sensing materials, permit inventory and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented.

Urban Geography and Planning

Ge 355 URBAN GEOGRAPHY 3 cr.

This course will introduce the student to the basic principles of urban geography. Concepts of site, situation, location, function, urban land use, central place theory, urban structure, and urban hierarchy, will be introduced. Relationships between urban geography and urban planning will be emphasized.

Ge 455 HISTORICAL GEOGRAPHY OF CITIES AND CITY PLANNING 3 cr.

Prerequisite: 12 cr. Ge and/or Soc Sci or permission.
Examines the process of city planning during the ancient, medieval, and Renaissance periods, and a review of early planning in America, as well as present city planning. (Fall semester only.)

Ge 456 GENERAL CITY AND REGIONAL PLANNING 3 cr.

Prerequisite: Ge 455.
Examines the four phases involved in the preparation of a community plan. Items such as land use, natural resources, topography, soils, geology, climate, and drainage are utilized in a general comprehensive plan. (Spring semester only.)

GE 457 URBAN DESIGN 3 cr.

Prerequisite: Ge 455.
Offers the student an opportunity to work on the various concepts of city and subdivision design, utilizing the effects of topography, natural resources and other physical elements upon urban design. (Spring semester only.)

Ge 458 URBAN PLANNING BASIC STUDIES AND ANALYSIS 3 cr.

Prerequisite: Ge 455.
Research, analytical design, and plan making techniques in urban regional planning; examines the basic items necessary to prepare urban and regional comprehensive plans. (Fall semester only.)

Regional Geography (No Prerequisites Required)

Ge 251 GEOGRAPHY OF UNITED STATES AND CANADA 3 cr.

Investigation of man's adjustment to his environment as influenced by the physical factors of climate, vegetation, relief soils, and natural resources, as well as recognition of cultural factors.

Ge 252 GEOGRAPHY OF PENNSYLVANIA 2 cr.

Studies internal and external relationships to gain insight into the various regions of the state and Pennsylvania's world relationships.

Ge 256 GEOGRAPHY OF EUROPE 3 cr.

Investigates relationships underlying land use, dominant international problems, boundary disputes and the regional complexes of the European continent.

Ge 257 GEOGRAPHY OF U.S.S.R. 3 cr.

Special emphasis upon the major geographic regions of the Soviet Union; natural resources, cultural patterns, population — both numbers and distribution, strategic areas and related geopolitical problems studied.

Ge 261 GEOGRAPHY OF EAST ASIA 3 cr.

Studies Korea, Manchuria, Outer Mongolia, Japan, and China, as well as the geographic background for planning solutions for raising standards of living, for wise use and restoration of natural resources, and industrialization.

Ge 262 GEOGRAPHY OF SOUTH AND SOUTHEAST ASIA 3 cr.

Studies India, Pakistan, Indochina, Ceylon, Burma, Thailand, and Indonesia, with special attention to regional similarities and differences, particularly as they pertain to human adjustment.

Ge 263 GEOGRAPHY OF NORTH AFRICA AND SOUTHWEST ASIA 3 cr.

Study of the Sahara Desert, Turko-Arabian peninsulas and Afghanistan, emphasizing the critical problems of water supply, land use, over-population, industrialization, resources and the relationships of these countries to other countries.

Ge 271 GEOGRAPHY OF SOUTH AMERICA 3 cr.

Studies South America, with special emphasis on regional differences and similarities; stresses foreign relations, especially with the United States. The unique problems of South America, with special attention to tropical land use, are considered.

Ge 281 GEOGRAPHY OF AFRICA, SOUTH OF SAHARA 3 cr.

A systematic study of the physical, cultural, and historical geography, followed by studies of the major regions and nations of Africa, emphasizing political, cultural, and economic factors in the development of that continent.

Education

Ed 455 TEACHING OF SOCIAL SCIENCE IN SECONDARY SCHOOLS 3 cr.

Study of modern methods and techniques for teaching Social Science and of current curricula in Social Science.

GEOSCIENCE DEPARTMENT

WALTER H. GRANATA, JR., CHAIRMAN; CLARK, HALL, PARK, PRINCE, C. SUTTON

The Geoscience Department provides curricula in areas of natural science dealing with and related to the earth and its environment by offering courses in astronomy, geology, meteorology, and oceanography.

In addition to on-campus instruction, opportunities exist for summer course work and research in geology and oceanography at the Marine Science Consortium located at Lewes, Delaware, and Wallops Island, Virginia. (See page 84.) Marine Science courses are described on pages 164-165.

Degrees offered by the Geoscience Department are the Bachelor of Science in Geology, the Bachelor of Arts in Geology, the Bachelor of Science in Geoscience, and the Bachelor of Science in Education with a major in Earth and Space Science or with a major in General Science. The first three degree programs are under the School of Arts and Sciences, and the last two are under the School of Education.

CURRICULA

The program leading to the Bachelor of Science degree in Geology is designed for students who are interested in pursuing their education beyond the level of the baccalaureate degree. Many professional careers in geology and associated geosciences require graduate school training, so the B. S. program in Geology is designed to provide the background necessary for admission to a graduate school.

The program leading to the Bachelor of Arts degree in Geology is designed to equip geology majors with the background necessary for obtaining certain positions as professional geologists, upon graduation. Qualified holders of the B. A. degree in Geology may anticipate careers in urban geology, engineering geology, and certain phases of economic geology, dealing with both the exploration for and the exploitation of natural resources.

The program leading to the Bachelor of Science in Geoscience is offered for the student desiring to pursue graduate work in astronomy, meteorology, or oceanography. The objective of the department is to plan a program that will provide the student with a strong background of mathematics and science courses so that he or she may confidently approach graduate studies in the area of his choice. Each individual program is closely supervised by a faculty member aware of graduate school demands and the student's goal.

The department recognizes as one of its functions the role of serving the field of public education by the preparation of qualified and certified teachers of earth and space science. Also, because of the interdisciplinary nature of both the department and the requirements for preparing general science teachers, the department administers the program designed to lead to general science certification and includes majors of that category as department members.

Minor in Geology

The minor in geology consists of 15 semester hours of geology. General Geology I and II are required. The remaining 7 hours of geology may be selected by the student. It is recognized that the anthropology student minoring in geology would benefit from courses differing in content from those benefiting students who, for example, are majoring in Urban Planning. The department staff members will be happy to consult with students concerning their special needs.

DEGREE PROGRAMS

B. S. in Geology

The departmental requirements for the Degree of Bachelor of Science in Geology are as follows:

Geology	30 cr.
Allied Geoscience	3 cr.
Math	
Calculus I	4 cr.
Calculus II or Probability & Statistics	3-4 cr.
Chemistry and Physics	16 cr.

B. A. in Geology

The departmental requirements for the degree of Bachelor of Arts in Geology are as follows:

Geology	36 cr.*
Math	
Calculus I	4 cr.
Physics and Chemistry	12 cr.

*Includes a summer field course of 5 cr.+

B. S. in Geoscience

The departmental requirements for the degree of Bachelor of Science in Geoscience are as follows:

Geoscience	
(Selected under advisor's supervision)	37-38 cr.
Math	
Calculus I and II	8 cr.
Biology	8 cr.
Chemistry	8 cr.
Physics	8 cr.

B. S. in Education (Earth and Space Science Major)

The departmental requirements for the degree of Bachelor of Science in Education with a major in Earth and Space Science are as follows, including 33 credits in Geoscience:

Astronomy	7 cr.
Geology	14 cr.
Meteorology	6 cr.
Oceanography	6 cr.
Math	
Calculus I	4 cr.
Biology	4 cr.
Chemistry	8 cr.
Physics	4 cr.

B. S. in Education (General Science Major)

A major in another science department may be certified in General Science if his program includes, or is supplemented with, the prescribed credits, as follows and 13 credits in Geoscience:

Astronomy	3 cr.
Geology	3-4 cr.

Geoscience Field course	3-4 cr.
Meteorology	3 cr.
Math	4 cr.
Biology	8 cr.
Chemistry	8 cr.
Physics	8 cr.
Science Elective	3 cr.

COURSE DESCRIPTIONS

GS 110 GENERAL ASTRONOMY 3 cr.

Specifically designed to introduce students to the discipline of astronomy; emphasis placed on study of the planets, the space program, the constellations, and the Milky Way. Two hours lecture, one laboratory session or night observation per week. No science or math majors except those completing general science certification requirements.

GS 120 GEOLOGY OF PENNSYLVANIA 3 cr.

A general course dealing with basic geologic principles, using the various geologic provinces and features of Pennsylvania as examples. For non-majors only. Two hours lecture, three hours laboratory per week.

GS 121 GENERAL GEOLOGY I 3 cr.

Introduction to the science of the earth; the properties and processes of the earth's interior and crust and their interaction with surface processes to shape and modify man's physical environment. Three hours lecture per week.

GS 122 GENERAL GEOLOGY II 3 cr.

Prerequisite: GS 121 or permission of instructor.
Introduction to the history of the earth, its physical changes and sequences of configuration, and the record of biological evolution. Three hours of lecture per week.

GS 131 GENERAL GEOLOGY I LABORATORY 1 cr.

Should be taken concurrently but may follow GS 121.
Identification of common minerals and rocks; introduction to topographic and geologic maps, to land forms, and to geologic structures. Three hours laboratory per week, including field trips.

GS 132 GENERAL GEOLOGY II LABORATORY 1 cr.

Should be taken concurrently but may follow GS 122.
Selected problems in geologic map interpretation, paleontology, and stratigraphic rock sequences. Three hours laboratory per week, including field trips.

GS 213 NAVIGATION 3 cr.

Thorough grounding in the meanings of terms used in navigation, in the purposes and use of navigational instruments and publications and in the theory and general methods of piloting, dead reckoning and electronic and celestial navigation. Two hours lecture, 2 hours laboratory per week.

GS 321 MINERALOGY 3 cr.

Prerequisite: GS 121 or Chem 111.
Concerned with the properties of minerals; introduction to crystallography and the chemistry of crystals, followed by a determination of minerals and their probable genesis. Two hours lecture, 3 hours laboratory per week.

GS 322 PETROLOGY 3 cr.

Prerequisite: GS 321.
Concerned with a description of rock character based upon the mineral components and the physical relationship between mineral components of a rock. Two hours lecture, 3 hours laboratory per week.

GS 324 GLACIAL GEOLOGY 3 cr.

Prerequisites: GS 121 and GS 122.
Study of the origin and development of all features resulting from the action of glaciers. Two hours lecture and a laboratory or field trip per week.

GS 325 STRUCTURAL AND FIELD GEOLOGY I 3 cr.

Prerequisite: GS 122.
Analysis of deformation structures and instruction on methods of obtaining and presenting structural information. Includes a geologic field mapping project, work with Brunton compass, aerial photographs, and structure sections. Two hours lecture, 3 hours laboratory per week.

GS 326 STRUCTURAL AND FIELD GEOLOGY II 3 cr.

Prerequisite: GS 325.
Study of deformation structures including foliation, lineation, and causes of deformation (geotectonics). Includes work with sterographic projections, plane table and alidade. Two hours lecture, 3 hours laboratory per week.

GS 327 GEOMORPHOLOGY 3 cr.

Prerequisites: GS 121 and GS 122.
A study of the origin of the earth's land forms, including the relationship of geologic structure to landform types and the role of geomorphic processes in landscape development. Two hours lecture, 3 hours laboratory per week.

GS 330 PALEONTOLOGY 3 cr.

Prerequisite: GS 122 or permission of instructor.
Study of the morphology, evolution, geologic significance and paleoecology of invertebrate fossils. Two hours lecture, 3 hours laboratory per week.

GS 335 ECONOMIC GEOLOGY 3 cr.

Prerequisite: GS 321.
Deals with the location and probable origin of fossil fuels, ores of the non-metals, and metallic ores, both ferrous and nonferrous. Two hours lecture, 3 hours laboratory per week.

GS 341 SOLAR SYSTEM 3 cr.

Prerequisite: Math 013 and Phys. 111.
Fundamentals of astronomy, with emphasis on observational methods, the mechanics and origin of the solar system, and the spatial relationship of the solar system to the other members of the universe. Two hours lecture, 3 hours laboratory or night observation per week.

GS 342 STELLAR ASTRONOMY 3 cr.

Prerequisite: Math 013 and Phys. 111.
Fundamentals of astronomy, with emphasis on the sun, stars, galaxies, the sidereal universe, and the use of spectroscopy for gathering astronomical data. Two hours lecture, 3 hours laboratory or night observation per week.

GS 350 OPERATION OF THE PLANETARIUM 1 cr.

Prerequisite: GS 341 and GS 342 or permission of instructor.
Designed to acquaint the student with the methods of operation and repair of a Spitz A-3-P planetarium. Content includes topics suitable for lectures to various age groups. Student will write and present a demonstration lesson.

GS 361 OCEANOGRAPHY I 3 cr.

Prerequisite: Physics I and Calculus I or permission of instructor.
Introduction to the physical, chemical, geological and biological nature of the ocean; topography, submarine geology and bottom deposits. Two hours lecture, 3 hours laboratory per week.

GS 362 OCEANOGRAPHY II 3 cr.

Prerequisite: GS 361.
A continuation of Oceanography I. Emphasis upon marine geology, coastal geomorphology, and the structure and sedimentary environments of the continental shelf, slope and ocean basin.

GS 371 METEOROLOGY I 3 cr.

Prerequisite: One year of Physical Science or Physics.
Introduction to meteorological sciences; composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance. Two hours lecture, 3 hours laboratory per week.

GS 372 METEOROLOGY II 3 cr.

Prerequisite: GS 371 or permission of instructor.
Introduction to physical, dynamical and theoretical meteorology. Two hours lecture and 3 hours laboratory per week.

GS 421 SEDIMENTOLOGY AND STRATIGRAPHY I 3 cr.

Prerequisite: GS 321 or permission of instructor.
Study of sedimentary processes and of the origin, interpretation, and identification of sedimentary rocks utilizing sieve analysis, hand lens, and the petrographic microscope. Two hours lecture, 3 hours laboratory per week, and field trips.

GS 422 SEDIMENTOLOGY AND STRATIGRAPHY II

Prerequisite: GS 421 or permission of instructor.
Principles and processes involved in the development and description of stratified rock sequences, principles and problems of correlation, and selected stratigraphic problems. Two hours lecture, 3 hours laboratory per week, and field trips.

GS 461 FIELD TECHNIQUE IN GEOSCIENCE 3 cr.

Instruction in methods employed in the field to obtain and interpret geologic information. Two hours lecture, 3 hours laboratory per week.

GS 491 GEOSCIENCE SEMINAR 1 cr.

For seniors majoring in some aspect of geoscience. The seminar serves a twofold purpose: (1) provides the student the opportunity to prepare, formally present, and defend a scientific paper based either on his own research or on a topic chosen by him with the approval of the instructor, (2) provides the opportunity to discuss topics presented by other students, faculty, or guests.

GS 498 PROBLEMS IN GEOSCIENCE 1-3 cr.

Selected problems in geoscience, investigated by upper level students. Credit may be determined by nature and scope of the work undertaken. Pre-registration approval of the instructor is required.

GS 499 RESEARCH IN GEOSCIENCE 1-4 cr.

A method of instituting and giving credit for supervised research on the part of upper level students. Pre-registration approval of the instructor is required.

NOTE: See Marine Science Consortium section for additional course listings.

HISTORY DEPARTMENT

CLYDE C. GELBACH, CHAIRMAN; CASHDOLLAR, CORD, FERGUSON, FRICKE, GOODRICH, HATFIELD, KADLUBOWSKI, KLEIN, LANDON, LEHMAN, MARCUS, MASTRO, MERVINE, MILLER, MOORE, OLIVER, RIFE, SAHLI, SMITH, VOGEL, YACKUBOSKEY.

Programs in history are designed to give both those who major in history in the School of Arts and Sciences, and those who concentrate in history in the School of Education an opportunity to study in some depth the past story of man and his world. Degrees offered by the History Department are the Bachelor of Arts in History and the Bachelor of Science in Education with a major in Social Studies, concentrating in history. The first program is under the School of Arts and Sciences, and the second is under the School of Education.

The history student will find that his program is excellent preparation for government service, for pre-law training, for broad business opportunities, for work in varied fields of journalism, for archival positions, and for teaching. Not only the story of the people of the United States, but also that of other peoples is covered, in the belief that historical understanding is essential for the future of mankind.

CURRICULA

Requirements for the degree of Bachelor of Arts in History are 30 credits in History. Requirements for the degree of Bachelor of Science in Education with a major in Social Studies, concentrating on History, are a minimum of 15 credits in History within the 42 hours required for social science certification. The requirement for a minor in History is 15 credits. For all history programs, courses in history in General Education are applicable. Although there are no prerequisites to history courses, all programs should be planned with an advisor. Every major and concentrate in History will be advised by History Department staff members.

Admission to History 490 and 491, initiation in the local chapters of Phi Alpha Theta and Pi Gamma Mu, participation in study tours and study-abroad programs, and

other activities should be investigated by every History student. The Department is committed to the idea of a broad education.

COURSE DESCRIPTIONS

Hist 101 HISTORY OF CIVILIZATION I 3 cr.

Survey course, presenting in various forms the origin and development of Western man's major political, social, economic, religious, and intellectual institutions to approximately 1600 A.D.

Hist 102 HISTORY OF CIVILIZATION II 3 cr.

Survey of man's development from 1600 A.D. to the present, in which economic, political, social, and intellectual trends are discussed, giving particular emphasis to the nineteenth and twentieth centuries.

Hist 103 HISTORY OF THE UNITED STATES AND PENNSYLVANIA I 3 cr.

Survey of American history from colonization to 1865, with attention to Pennsylvania, the colonial foundations, the emergence of our Federal Union, political and social reform, and the controversy over sectionalism and slavery.

Hist 104 HISTORY OF THE UNITED STATES AND PENNSYLVANIA II 3 cr.

Survey of the history of the United States and Pennsylvania since 1865, with emphasis on major economic, political, and social trends and the development of American culture. Also considered is the role of America in world affairs.

Hist 345 COLONIAL AMERICA 3 cr.

Survey of United States history to 1783, with special attention to economic, political, and social trends.

Hist 346 MIDDLE PERIOD OF THE UNITED STATES, 1783–1850 3 cr.

Survey of United States history from 1783 to 1850, with special attention to constitutional, political, economic, and social trends.

Hist 347 CIVIL WAR AND RECONSTRUCTION 3 cr.

Study of the failure of American democracy to cope with the issues of the mid-nineteenth century, followed by the political, economic, military, and social developments during the War and the reconciliation of the North and South.

Hist 348 HISTORY OF THE UNITED STATES, 1876–1900 3 cr.

Stresses the reaction of various segments of a heterogeneous population to rapid industrialization, urbanization, and corporatization of American life and the emergence of the U.S. as a world power; special attention to the formation of new institutions.

Hist 350 HISTORY OF LATIN AMERICA: COLONIAL PERIOD, 1450–1820 3 cr.

Study of the life of the people, the Indian cultures, the conquest by the Spaniards and Portuguese, the government during the Colonial Period, and the Wars of Independence.

Hist 351 HISTORY OF LATIN AMERICA: NATIONAL PERIOD, 1820–PRESENT 3 cr.

Study of the history of the nations which have emerged since independence; emphasis on the economic, political, cultural, and social developments of these nations, as well as the relationships of these nations to others in the Hemisphere.

Hist 352 HISTORY OF ENGLAND TO 1688 3 cr.

Survey of the growth of the English nation, with emphasis on the political, social, and economic developments leading to the 17th century conflict between Crown and Parliament.

Hist 353 HISTORY OF ENGLAND, 1688 TO PRESENT 3 cr.

Survey of the growth of England as a democratic constitutional monarchy. Attention is directed to the industrial revolution, and to imperial expansion and England's role in the 20th century world.

Hist 354 HISTORY OF RUSSIA 3 cr.

General survey of Russian history, culture, and institutions. Special consideration is given to the study of those historical forces formative of the Revolution of 1917.

Hist 355 HISTORY OF SOVIET RUSSIA 3 cr.

General survey of contemporary Soviet history, culture, and institutions. Special consideration is given to the study of communist theory and its place in current Russian historiography.

Hist 356 FRENCH REVOLUTION AND NAPOLEON 3 cr.

Brief sketch of medieval France and the development of the monarchy; concentration on the Old Regime, Revolution, and Empire, with emphasis on politics, diplomacy, and economics, Readings and brief papers.

Hist 357 MODERN FRANCE 3 cr.

Investigation of the political cultural, economic, and social developments since 1815. Lectures, discussions, and papers.

Hist 358 HISTORY OF GERMANY TO 1848 3 cr.

Study of the evolution of the German nation from its prehistoric origins, emphasizing medieval and early modern phases, to 1848.

Hist 359 HISTORY OF GERMANY: 1849–1949 3 cr.

Study of the development of modern Germany from the Revolution of 1848, including imperial, republican, and totalitarian phases, to the post-War formation of partitioned Germany.

Hist 361 CONTEMPORARY UNITED STATES HISTORY 3 cr.

Study of the political, economic, and cultural changes in American life since 1929; examines the roots of social problems facing us today. Some recent foreign policy trends also studied.

Hist 362 AMERICAN LABOR MOVEMENT 3 cr.

Investigation of the growth of the American labor movement from the eighteenth century to the present; emphasis on the role of the Knights of Labor, American Federation of Labor, Industrial Workers of the World and Congress of Industrial Organizations.

Hist 363 DIPLOMATIC HISTORY OF THE UNITED STATES 3 cr.

Traces the history of our foreign relations from the American Revolution to the present; emphasis on those principles and major policies upon which our foreign policies are based.

Hist 365 HISTORY OF PENNSYLVANIA 3 cr.

Emphasizes the cultural, economic, political, and social development of our state in its various periods from the colonial to today. Special attention is given to the diversity of Pennsylvania's people, their institutions, and problems.

Hist 366 HISTORY OF THE ISLAMIC CIVILIZATION 3 cr.

An approach to learning about a non-Western culture: Muhammad, Arabs, Muslims as the creators of a great civilization from the rise of Islam to 1800; the emphasis on cultural institutions and their inter-relationships within the Middle East.

Hist 368 HISTORY OF THE UNITED STATES, 1900–1929 3 cr.

Emphasis on political, social, economic, and diplomatic developments in American history between 1900 and 1929.

Hist 371 RENAISSANCE AND REFORMATION 3 cr.

History of Europe from c. 1250; rise of commercial city, Kings, and pressures on Christian Church to 1600. Some consideration of technology and voyages.

Hist 372 EARLY MODERN EUROPE 3 cr.

Greatness of France under Louis XIV; Sweden; Thirty Years' War. Emergence of modern society; French Revolution.

Hist 373 HISTORY OF EUROPE: 1815–1914 3 cr.

Study of Europe in the nineteenth century, with emphasis on political, diplomatic, military, and economic affairs. The course is devoted to a description of the major European states in this century, to topical consideration of such items as Imperialism, Nationalism, Socialism, and the Industrial Revolution.

Hist 374 TWENTIETH CENTURY EUROPE 3 cr.

The political, economic, and diplomatic trends in Europe since 1900, with major emphasis on the causes and results of war, and the search for security.

Hist 375 HISTORY OF THE FAR EAST 3 cr.

History of China and Japan from ancient times. Buddhism, medieval Japan, Chinese Communism, industrialization. Some consideration of peripheral Asia from 1500.

Hist 376 HISTORY OF THE MODERN MIDDLE EAST 3 cr.

Survey of the changes that have taken place in the Middle East and in Islam since the eighteenth century and of the contemporary problems in the region.

Hist 380 MEDIEVAL EUROPE I, 400–900 3 cr.

History of early Medieval Europe, from the decline of Rome to the beginnings of the High Middle Ages; emphasis on the political, social, economic, religious, and intellectual developments.

Hist 381 MEDIEVAL EUROPE II, 900–1350 3 cr.

History of late Medieval Europe, from the High Middle Ages to the Renaissance period; emphasis on political, social, economic, religious, and intellectual developments.

Hist 390 SOCIAL AND INTELLECTUAL HISTORY OF THE UNITED STATES TO 1875 3 cr.

Selected topics in early American intellectual and cultural growth, with emphasis on Puritanism, the Enlightenment, cultural nationalism, and the Romantic Movement.

Hist 391 SOCIAL AND INTELLECTUAL HISTORY OF THE UNITED STATES SINCE 1875 3 cr.

Selected treatment of the historical development of modern American movements in social and political thought, religion, philosophy, the fine arts, and literature.

Hist 392 ECONOMIC HISTORY OF THE UNITED STATES 3 cr.

A study of the historical development of economic institutions in American life since Independence; emphasis on farming, labor, transportation, banking and manufacturing.

Hist 393 HISTORY OF BLACK AMERICA SINCE EMANCIPATION 3 cr.

Description and analysis of the role of blacks in the history of the United States since the Civil War; emphasis on the key leaders, major organizations, leading movements and the crucial ideologies of blacks in modern America.

Hist 400 SPECIAL STUDIES IN HISTORY 3-6 cr.

Hist 490 HISTORY HONORS 3 cr.

Prerequisite: a B average in history courses, which must be maintained during the honors program. Admission by invitation only, with approval of Department Chairman.
Independent reading and research for one semester under the direction of a Department member.

Hist 491 HISTORY HONORS 3 cr.

Extension of History 490; admission by invitation only, with the approval of the Department Chairman.

Ed 455 TEACHING SOCIAL STUDIES IN THE SECONDARY SCHOOL 3 cr.

This course provides an opportunity to develop understandings and competencies for teaching the "new" social studies. Emphases include: learning objectives, content selection, inquiry-oriented strategies and materials, written plans for teaching, and evaluation of the results of learning.

CENTER FOR INTERNATIONAL STUDIES

ROBERT L. MORRIS, DIRECTOR

The Center for International Studies offers several different programs to meet the needs of the University. It facilitates study-abroad programs and foreign exchanges for students and faculty. Degree programs are offered in both the School of Arts and Sciences (Bachelor of Arts) and the School of Education (Bachelor of Science in Education). Both degrees are interdisciplinary and, consequently, draw upon the faculty and course offerings of many other departments. The course selection is broad enough to prepare the student for any one of a great variety of career opportunities. The Bachelor of Arts program is designed for the specialist who is interested in a professional career; the Bachelor of Science in Education program for majors in Social Sciences is designed to certify the graduate to teach world cultures or any of the social sciences in the public schools.

CURRICULA

B. A. Program

Beyond the General Education courses required of all students in the University, the requirements for the degree of Bachelor of Arts in International Studies are as follows:

(1) He must complete two introductory courses in International Studies (6 credits); PolS 281 — International Relations and PolS 282 — International Law and Organizations. (The B. S. in Education candidate may substitute IS 101 for PolS 282.)

(2) He must build an interdisciplinary sequence selected from at least three of six specified groups (9 to 17 credits). This selection depends upon the goal of the major and should be determined in consultation with his advisor and/or the Director of the Center for International Studies.

(3) He must complete a specialization in the economic and political systems of another culture, including a study of the language, literature, history, and geography of a specific region of the

world (12-17 credits). Currently, three specializations are offered: Soviet Studies, The Far East, and Latin America. However, students interested in Africa or the Middle or Near East may elect interdisciplinary courses focusing on the developing nations. It is also possible to build a program centering on the Atlantic community of nations.

Specialization must include work in at least three disciplines. The student is expected to have completed the intermediate language sequence of the appropriate language in the General Education requirements, so that no credit towards specialization is given for language courses numbered below the 300 level.

Minor in International Studies

A minor in International Studies consists of meeting the requirements listed under (1) and (2) above. The curriculum of the Center for International Studies is flexible enough that the student can plan a program to match his interests.

B. S. in Education (International Studies Concentrate)

A concentration in International Studies will supplement the student's required courses and leads to Certification in the social science fields for teaching positions in the state of Pennsylvania.

COURSE DESCRIPTIONS

IS 101 WORLD POLITICS 3 cr.

Analysis of the contemporary (Post-1945) state system and the forces shaping the world in which the student lives. The student is given a framework within which he can analyze contemporary international politics.

See pages 85-87 for Study Abroad Progams.

MARINE SCIENCE CONSORTIUM

PAUL PRINCE AND GOULD SCHROCK – I.U.P. DIRECTORS TO THE MARINE SCIENCE CONSORTIUM.

The following course listings are offered through the Marine Science Consortium which operates during the summer at the Delaware Bay Marine Science Station, Lewes, Delaware, and the NASA-Wallops Island Station, Virginia. See page 84 for additional information.

All courses include lecture and field work and meet for morning and afternoon sessions on Monday through Friday.

Mar Sci 110 INTRODUCTION TO OCEANOGRAPHY 3 cr.

Prerequisites: None.
Introduction to the physical, chemical, biological and geological aspects of the oceans and the methods and techniques of oceanography.
Lab emphasis placed on at-sea assignments.

Mar Sci 211 FIELD METHODS IN OCEANOGRAPHY 3 cr.

Prerequisites: Mar Sci 110 or consent of the instructor.
Familiarization with the dynamic marine environment involving the use and application of oceanographic instruments and sampling devices.

Mar Sci 221 INVERTEBRATE ZOOLOGY 3 cr.

Prerequisites: One year biology or consent of the instructor.
A study of the marine invertebrates with emphasis on development, reproduction, structure, function, and classification of selected marine organisms.

Mar Sci 241 MARINE BIOLOGY 3 cr.

Prerequisites: Botany and zoology or consent of the instructor.
A study of plant and animal life in the marine environment with emphasis placed upon physical and chemical factors affecting the biota.

Mar Sci 260 MARINE ECOLOGY 3 cr.

Prerequisites: One year of biology or consent of the instructor.
A course in the ecology of marine organisms.

Mar Sci 270 SCUBA DIVING non-credit or 3 cr.

Prerequisites: Swimming ability and good health. (A standard diving physical form will be mailed to students electing the course.)
Students who complete the course will receive a National Association of Underwater Instructors Diver Certification.

Mar Sci 331 CHEMICAL OCEANOGRAPHY 3 cr.

Prerequisites: Mar Sci 110 and one year of chemistry.
Treatment of oceanic chemical phenomena by sampling and laboratory analysis techniques.

Mar Sci 342 MARINE BOTANY 3 cr.

Prerequisites: One year of biology or one semester of botany.
In-the-field studies and laboratory analysis by instrumentation of the marine and marine fringe plants of the Middle Atlantic Coast as exemplified by those found in the Cape Henlopen, Delaware, and Wallops Island, Virginia, areas.

Mar Sci 344 ANATOMY OF MARINE CHORDATES 3 cr.

Prerequisites: Six hours of biology including general Zoology.
A course designed to familiarize students with various aspects of marine chordates.

Mar Sci 362 MARINE GEOLOGY 3 cr.

Prerequisites: Mar Sci 110 and physical geology or consent of the instructor.
Studies of the structural and sedimentary environments of the continental shelf, slopes, and ocean basins and the crustal structure of the earth and its relation to the sedimentary record and geologic history of the oceans.

Mar Sci 420 MARINE MICROPALEONTOLOGY 3 cr.

Prerequisites: One year of geology and biology or consent of the instructor.
The course deals with modern, living representatives of microorganisms important in the fossil record with particular emphasis placed on the taxonomy, morphology, evolution and ecologic affinities of representative groups.

Mar Sci 500 PROBLEMS IN MARINE SCIENCE 3 cr.

Graduate students or undergraduate students with advanced standing registering for this course may elect either of the following options:

Option A: Take a 200, 300, or 400 level Mar Sci course and complete in addition to the regular course requirements a project in the area under the direction of the instructor.

Option B: Complete an independent research project. A research proposal must be approved by the Academic Committee of the M.S.C. in advance of the time the research is to be pursued.

MATHEMATICS DEPARTMENT

MELVIN R. WOODARD, CHAIRMAN; ANGELO, ARMS, BERTNESS, BROUGHTON, BURIOK, BUSOVICKI, CROOKS, A. DAVIS, DUNCAN, R. GIBSON, HARTMAN, HENNEMANN, HOYT, MADERER, D.McBRIDE, R. McBRIDE, McCOY, MORRELL, MUELLER, OAKES, PETERS, REBER, REIGH, RETTIG, D. SHAFER, SHAWER, SHEPLER, E. SMITH, W. SMITH, SPEAKMAN, STILWELL, TROXELL, WILLISON, R. WOLFE, DEISHER, W. LONG, WESTWOOD.

Degrees offered by the Mathematics Department are the Bachelor of Science in Mathematics, the Bachelor of Arts in Mathematics, the Bachelor of Science in Applied Mathematics, the Bachelor of Arts in Applied Mathematics, and the Bachelor of Science in Education with a Mathematics major. The first four degree programs are under the School of Arts and Sciences, and the fifth is under the School of Education. The Department also offers a Mathematics minor.

CURRICULA

The program for a mathematics major in the School of Arts and Sciences is two-phased. A student may pursue a degree in Mathematics or a degree in Applied Mathematics. Those completing a degree in Mathematics will be prepared to continue their studies in mathematics in graduate school though some may enter business, industry, or Government service. Those students receiving a degree in Applied Mathematics will be primarily prepared to enter business, industry, or Government service in an area where mathematics or computer science is used or to continue their studies in applied mathematics or computer science in graduate school. This student would not be expected to continue graduate studies in pure mathematics.

For either program, the Mathematics major requires 36 credits in mathematics, distributed as described later. If in addition to these 36 credits, the student elects at least an additional 26 credits in the Natural Sciences and Mathematics Division, he receives the Bachelor of Science degree. Otherwise he receives the Bachelor of Arts degree.

The program leading to the B.S. in Education with a Mathematics major prepares the student for teaching mathematics in junior or senior high school. Many graduates,

however, continue their formal education in mathematics at the graduate level.

Core Program

Requirements for ALL Mathematics majors, beyond the University's General Education requirements, are Computer Science 110 and 18 credits in Mathematics, as follows:

Math 111, 113, 115 – Calculus I, II, and III	12 cr.
Math 231 – Introduction to Algebraic Structures	3 cr.
Math 233 – Introduction to Linear Algebra	3 cr.

B. A. or B. S. in Mathematics

In addition to the Core Program, requirements for both the B. A. and the B. S. in Mathematics are 18 more credits in Mathematics, as follows:

I	Math 381 – Advanced Calculus I	3 cr.
	Math 376 – Abstract Algebra I	3 cr.
II	At least 3 credits in one of the following:	
	Math 382 – Advanced Calculus II	3 cr.
	Math 377 – Abstract Algebra II	3 cr.
	Math 421 – Introduction to Topology	3 cr.
III	At least enough credits in the following courses to meet the minimum requirements of 36 credits total for the major:	
	Math 371 – Linear Algebra	3 cr.
	Math 355 – Foundations of Geometry I	3 cr.
	Math 356 – Foundations of Geometry II	3 cr.
	Math 361 – Ordinary Differential Equations	3 cr.
	Math 363 – Introduction to Probability	3 cr.
	Math 364 – Mathematical Statistics I	3 cr.
	Math 365 – Mathematical Statistics II	3 cr.
	Math 423 – Complex Variables I	3 cr.
	Math 425 – Complex Variables II	3 cr.
	Math 341 – Theory of Numbers	3 cr.

It is strongly recommended that the Mathematics major take two of the three courses in Section II, one of the two being Topology. It is further recommended that students who intend to take graduate courses in mathematics check the requirements for entrance to their intended school of graduate study for guidance in choosing courses from Section III.

B. A. or B. S. in Applied Mathematics

In addition to the Core Program, requirements for the B. A. and the B. S. in Applied Mathematics are as follows:

Math 361 – Ordinary Differential Equations	3 cr.
Math 471 – Advanced Calculus for Applications	4 cr.
Math 363 – Probability	3 cr.
Math 364 – Mathematical Statistics I	3 cr.
Math 423 – Complex Variables I	3 cr.
Math 480-489- Seminar in Mathematics (This might be optimization, problem solving, partial differential equations, game theory, etc..)	2 cr.
CSci 250 – Introduction to Numerical Methods	3 cr.
CSci 350 – Applied Numerical Methods	3 cr.

B.S. in Education (Mathematics Major)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a Mathematics major are credit for Computer Science 110 plus 16 credits in Mathematics, including Education 452, as follows:

I. Required courses:

Math 355 – Foundations of Geometry	3 cr.
Math 452 – Mathematics Seminar*	1 cr.
Ed 465 – Teaching Mathematics in the Secondary Schools	3 cr.

*Seminars in teaching geometry, teaching algebra, and teaching general mathematics will be conducted as part of the seminar offerings. It is strongly recommended that each Mathematics major take one of these seminars. It should be noted that the student may take as many as 3 additional credits in Mathematics Seminar.

II. Two 3-credit courses (total of 6 credits) must be selected from the following five courses:

Math 376 – Abstract Algebra I	3 cr.
Math 381 – Advanced Calculus I	3 cr.
Math 371 – Linear Algebra	3 cr.
Math 363 – Introduction to Probability	3 cr.
Math 341 – Theory of Numbers	3 cr.

III. Mathematics elective (see above) 3 cr.

One of the purposes of the program is to provide maximum flexibility in student course selection. Prior to scheduling for the junior year, all Mathematics Education majors will meet for the purpose of being

advised regarding courses they should elect, depending on whether they desire to teach at the junior high level or the senior high level, or to enroll in graduate school.

Minor in Mathematics

The minor in Mathematics consists of 18 credits, made up of Math 111 and Math 113, Calculus I and Calculus II, plus additional credits in Mathematics selected from the courses listed for Mathematics majors. This excludes Math 101, Fundamentals of Math, and Math 362, Probability and Statistics.

COURSE DESCRIPTIONS

Math 011 ELEMENTARY FUNCTIONS 3 cr.

Designed for students not prepared to begin the study of calculus; topics include polynomial, exponential, logarithmic and trigonometric functions and an introduction to three-dimensional analytic geometry. Three hours lecture per week.

Math 013-015 CALCULUS I AND II FOR THE NATURAL AND SOCIAL SCIENCES 4 cr. each

Prerequisite: Two years of high school mathematics.
Introduces the student who is not majoring in mathematics to analytic geometry, elementary functions (which include trig functions), the central ideas of the calculus (limit, derivative and integral), applications of these central ideas to the social and natural sciences and numerical methods that involve series. Four hours lecture per week.

Math 017/019 CALCULUS I AND II FOR PHYSICS 4 cr. each

Prerequisite: High school algebra, geometry, and trigonometry.
Techniques of differentiation and integration, with application to analytic geometry of two and three dimensions by means of vector analysis (algebra and calculus), kinematics, surface integrals, line integrals, infinite series, matrices and simultaneous linear equations, differential equations with numerous applications to physical problems. Four hours lecture per week.

Math 101 FOUNDATIONS OF MATHEMATICS 3 cr.

Designed to familiarize students with some of the ideas underlying the development of mathematics. The objective is not to develop computational skills, but to study mathematics in its role as both an art and a science. Topics include: set theory, logic, probability, numeration and number systems. Three hours lecture per week.

Math 111/113/115 CALCULUS I, II, AND III 4 cr. each

Prerequisite: Permission of the Mathematics Department.
These courses stress the theory of the calculus as well as the applications in problem solving. Topics included are: Calculus I: sets and functions, two-dimensional analytic geometry, limits, deriv-

atives with applications; Calculus II: The Riemann integral and its properties, approximation of integrals, applications of the integral, and the development for differentiating and integrating the transcendental functions; Calculus III: polar coordinates, continuity and differentiation of functions of several variables, multiple integrals, line and surface integrals, theory of continuous and differentiable functions and series. Four hours lecture per week.

Math 231 INTRODUCTION TO ALGEBRAIC STRUCTURES 3 cr.

This course serves to acquaint the student of mathematics with the basic ideas of contemporary mathematics. Topics include mathematical logic, algebra of sets, equivalence relations and partitions of sets, functions, and fundamentals of group theory. Methods of proof in the area of abstract mathematics is stressed.

Math 233 INTRODUCTION TO LINEAR ALGEBRA 3 cr.

An introduction to vector spaces, linear transformations and matrix theory. The course begins concepts studied in a more theoretical setting in Math 371. Three hours lecture per week.

Math 341 THEORY OF NUMBERS 3 cr.

Prerequisite: Math 115.
Divisibility, congruences, primitive roots, number theoretic functions, diophantine equations, continued fractions, quadratic residues. Three hours lecture per week.

Math 355 FOUNDATIONS OF GEOMETRY I 3 cr.

Prerequisite: Math 231, 233.
Studies the various groups of transformations and the geometries associated with these groups in the Euclidean plane. The Euclidean Similarity, Affine and Projective Groups of Transformations are studied. Three hours lecture per week.

Math 356 FOUNDATIONS OF GEOMETRY II 3 cr.

Prerequisite: Math 355.
An extension of the ideas of Math 355. The real projective plane is introduced and the analytic projective geometry of this plane. Three hours lecture per week.

Math 361 ORDINARY DIFFERENTIAL EQUATIONS 3 cr.

Prerequisite: Math 015, 019, or 115.
Special solvable non-linear equations, linear equations with solutions based on operator techniques, the Laplace transform, or infinite series. Numerous applications to physical problems. Three hours lecture per week.

Math 362 PROBABILITY AND STATISTICS 3 cr.

For non-math majors.
Frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression; emphasis on applications, as opposed

to theoretical development of the subjects. Three hours lecture per week.

Math 363 INTRODUCTION TO PROBABILITY 3 cr.

Prerequisite: Math 015 or 115.
Probability theory necessary for an understanding of mathematical statistics is developed in this course; applications of the theory are given, with emphasis on the binomial, the Poisson, and the normal distributions. Distributions of sums and a central limit theorem are developed. Three hours lecture per week.

Math 364 MATHEMATICAL STATISTICS I 3 cr.

Prerequisite: Math 363.
Multivariate distributions, properties of the moment generating function, change of variable technique, the Chi-square distribution, estimation, confidence intervals, testing hypotheses, contingency tables, goodness of fit. Many practical applications. Use of calculating machines where appropriate. Three hours lecture per week.

Math 365 MATHEMATICAL STATISTICS II 3 cr.

Prerequisite: Math 364.
Correlation and regression from applied and theoretical points of view, bivariate normal distribution, small sample theory. Student's t and F distributions, analysis of variance, nonparametric methods. Many practical applications. Use of calculating machines or computers where appropriate. Three hours lecture per week.

Math 371 LINEAR ALGEBRA 3 cr.

Prerequisites: Math 231 and 233.
Topics covered in Math 233 are explored more deeply. Canonical forms, elementary divisors and multi-linear algebra are studied. Three hours lecture per week.

Math 376 ABSTRACT ALGEBRA I 3 cr.

Prerequisites: Math 231 and 233.
Development of the theory of integral domains, fields, rings, and groups; designed to develop the student's power to think for himself and to improve his ability to construct formal proofs. Three hours lecture per week.

Math 377 ABSTRACT ALGEBRA II 3 cr.

Prerequisite: Math 376.
Designed to have the student continue the study of algebra by use of the axiomatic method; Euclidean domains; polynomial domains and extension fields are included; inter-relationships between these structures and simpler structures, particularly groups and rings, are developed as in the study of the Galois group of a polynomial and in an introduction to Galois Theory. Three hours lecture per week.

Math 381 ADVANCED CALCULUS I 3 cr.

Prerequisite: Math 015, 019, or 111.
Study of set theory, the real number system, functions, the

topology of cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity. Three hours lecture per week.

Math 382 ADVANCED CALCULUS II 3 cr.

Prerequisite: Math 381.
Includes the study of convergence, sequences in R, global properties of continuity, uniform continuity, differentiation in R, Reimann integrals, and infinite series. Three hours lecture per week.

Math 421 INTRODUCTION TO TOPOLOGY 3 cr.

Prerequisite: Math 115.
The basis of the course is the study of sets, functions, continuity, compactness, the separation axioms, and metric spaces; application of topology to analysis is demonstrated. Three hours lecture per week.

Math 423-425 COMPLEX VARIABLES I AND II 3 cr. each

Prerequisite: Math 115.
Introduction to the theory of functions of a complex variable; topics included are elementary functions, analytic functions, conformal mapping, integration, series, and applications. Three hours lecture per week.

Math 452 SEMINAR IN TEACHING ALGEBRA 1-4 cr.
Math 453 SEMINAR IN TEACHING GEOMETRY
Math 454 SEMINAR IN TEACHING GENERAL MATHEMATICS

These seminars are designed for the pre-student teacher. The students in each class will gain insights into the problems in teaching each topic. They will become aware of the materials available and methods of instruction geared to the special type of student. Education Majors only.

Math 471 INTRODUCTION TO APPLIED MATHEMATICS 4 cr.

Selected mathematical topics that are encountered in intermediate and advanced physics. Four hours lecture per week.

Math 480-489 SEMINAR IN MATHEMATICS 1-4 cr.

These seminars cover topics such as game theory, optimization, calculus of variations, etc., beyond the scope of the courses normally given. Seminar topics for a given semester will be available at the time of registration. Course structure is at the discretion of the professor.

Ed 465 TEACHING MATHEMATICS IN THE SECONDARY SCHOOLS 3 cr.

(To be taken the semester or summer session preceding student teaching.)
Designed to prepare students to teach mathematics in the modern secondary school. Lesson planning and presentation evolves from examination of teaching strategies, use of media in teaching mathematics, and handling of individual differences. Three hours lecture per week.

Courses for Elementary Education Majors Only

Math 160 MATHEMATICS FOR ELEMENTARY TEACHERS I 3 cr.

Topics included are: sets, relations, and functions, methods of proof, development and structure of numeration systems, operations on the whole numbers and their properties, developing the set of integers. Three hours lecture per week.

Math 250 MATHEMATICS FOR ELEMENTARY TEACHERS II 3 cr.

Prerequisite: Math 160.
Topics included are: operations on the integers and their properties, development of the rational number system, development of the real number system, topics from number theory, finite number systems, informal geometry and an introduction to topics in probability. Three hours lecture per week.

Math 251 BASIC CONCEPTS OF ALGEBRA (ELEMENTARY) 3 cr.

Prerequisite: Math 250.
Treats topics touched upon in earlier courses but from a more axiomatic point of view; included are: language and proof in elementary algebra, algebraic structures, the real numbers as a complete ordered field, algebraic expressions and functions and (if time permits) the complex number system. Three hours lecture per week.

Math 350 FOUNDATIONS OF INFORMAL GEOMETRY (ELEMENTARY) 3 cr.

Prerequisite: Math 250.
In line with present trends in the mathematics curriculum for elementary schools, topics in geometry are studied from the standpoints both of depth in deductive reasoning and of the presentation of topics to children. Three hours lecture per week.

Math 351 PRE-CALCULUS MATHEMATICS (ELEMENTARY) 3 cr.

Prerequisite: Math 251.
Examines the function concept as applied to elementary real number functions (polynomial, periodic, exponential and logarithmic functions); selected topics from algebra and analytic geometry included as time permits. Three hours lecture per week.

El 313 TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOLS 3 cr.

Prerequisite: Math 160, for Special Education Majors.
Prerequisite: Math 250, for Elementary Education Majors.
Emphasis given to recent developments in curriculum and instruction, techniques for developing concepts, implications of recent research, and resources and materials helpful to prospective teachers. Three hours lecture per week.

NATURAL SCIENCES

CHARLES R. FUGET, DIRECTOR

The program leading to the Bachelor of Science degree in Natural Sciences is designed to prepare students for various professional schools — optometry, chiropractic, podiatry, pharmacy, dentistry (not recommended for medical schools). The degree is offered by the School of Arts and Sciences.

In addition to the University's General Education requirements and the requirements of the School of Arts and Sciences, the credits required for the major in Natural Sciences are as follows:

Natural Science (38 credits)	
Biology	14 cr.
Chemistry	16 cr.
Physics	8 cr.
Mathematics or Computer Science	7-8 cr.

NOTE: The credits in Natural Science and in Mathematics INCLUDE those required in the General Education portion of the degree requirements.

PHILOSOPHY DEPARTMENT

ROBERT M. HERMANN, CHAIRMAN; BOONE, CHAN, FERRARA, KANNWISHER, LIN, MONTGOMERY, SCHAUB.

"Philosophy is an attitude of mind towards doctrines ignorantly entertained . . . a resolute attempt to enlarge the understanding of the scope of application of every notion which enters into our current thought."

A. N. Whitehead

"The value of philosophy is . . . to be sought largely in its very uncertainty . . . It removes the somewhat arrogant dogmatism of those who have never travelled into the region of liberating doubt."

Philosophy (Major and Minor)

The Philosophy Department offers, in addition to the introductory course, a variety of electives designed to serve the needs of two kinds of students.

Those majoring or minoring in philosophy, whatever their vocational aims, must satisfy the requirements indicated on the chart below. They should expect to emerge from philosophic studies having undergone some quite unpredictable changes in attitude and belief. Few escape such transformation, for objective inquiry in the philosophic discipline is calculated to this end . . . to forcing an examination of every theoretical tenet, and to "following the argument, wherever it leads."

Those whose primary interests are in other disciplines will find one or more philosophy courses which relate directly to their fields on the speculative level. Minoring is especially encouraged for its reflective benefits, and because professional philosophers frequently come to their vocational choices late in an academic career.

But apart from professional values, we would insist with William James that "to know the chief rival attitudes towards life . . . and to have heard some of the reasons they can give for themselves, ought to be considered an essential part of liberal education."

Religious Studies

The department also offers an ancillary program in religious studies, though neither a major nor minor is as

yet available. These courses are indicated by an asterisk. Only two, Phil. 311 and 329, carry credit toward the major or minor in philosophy.

The program, together with several related courses in other disciplines, recommends itself to pre-seminarians, and to every other student interested in a better understanding of that complex and influential phenomenon called "religion."

Requirements for Major and Minor

MAJOR		MINOR
	Phil. 221, Logic I, General Logic	
	or	
	Phil. 321, Logic II, Formal Systems	
	or	
3 cr.	Phil. 322, Logic and Language	3 cr.
	Phil. 222, Ethics	
	or	
3 cr.	Phil. 328, Aesthetics	3 cr.
3 cr.	Phil. 324, History of Philosophy I	3 cr.
3 cr.	Phil. 325, History of Philosophy II	3 cr.
3 cr.	Phil. 410, Contemporary Philosophy	3 cr.
	Phil. 420, Metaphysics	
	or	
3 cr.	Phil. 421, Epistemology	3 cr.
3 cr.	Phil. 430, Honors Thesis	
12 cr.	Departmental Electives	3 cr.
33 cr. Total		21 cr. Total

Basic Courses

Phil. 110 WORLD RELIGIONS * 3 cr.

History, comparative theology, ritual and contemporary influences of the world's major religions. A nonsectarian study of Hinduism, Buddhism, Confucianism, Taoism, Shinto, Zoroastrianism, Judaism, Christianity, and Islam.

Phil. 120 INTRODUCTION TO PHILOSOPHY 3 cr.

Designed to acquaint the beginning student with philosophical problems and methods in such areas as metaphysics, epistemology, logic, value theory and the philosophy of religion.

Electives

Phil. 210 WORLD SCRIPTURES* 3 cr.

Major sacred writings of the Hindu, Buddhist, Zoroastrian, Moslem, Confucian, Taoist, and Judeo-Christian traditions will be studied from the point of view of their religious significance.

Phil. 221 LOGIC I – GENERAL LOGIC 3 cr.

An introduction to the techniques of formal deductive logic, designed to enable the student to evaluate consistency of statements and validity of arguments.

Phil. 222 ETHICS 3 cr.

An investigation of efforts to rationally justify moral judgment. What is the "moral?" Are moral notions cultural, rational, divine, or innate in origin? Are they "relative" or "absolute?" Are they intuitive, cognitively meaningless, or supportable by "good reasons?"

Phil. 310 WESTERN RELIGIOUS THOUGHT IN DEVELOPMENT* 3 cr.

Theological development of the Judeo-Christian religious tradition, approached through in-depth study of selected writings from the early Church Fathers to the Protestant Reformers.

Phil. 311 ORIENTAL RELIGIO-PHILOSOPHIC THOUGHT* 3 cr.

Advanced study in those religious philosophies which have shaped the oriental worldviews and ways of life. Emphasis on Hinduism, Jainism, Buddhism, Confucianism, Taoism, Mohism, and Shinto.

Phil. 321 LOGIC II – FORMAL SYSTEMS 3 cr.

A continuation of Logic I designed to enable the student to evaluate consistency of statements, validity of arguments, and other topics such as soundness and completeness, quantificational calculus, and inductive logic. (Recommended to math and science majors in substitution for Logic I as a general education requirement.)

Phil. 322 LOGIC AND LANGUAGE 3 cr.

An investigation of topics in philosophical logic and the philosophy of language, e.g., techniques of conceptual analysis, meaning, reference, and the meaning of ethical, political and aesthetic terms.
(No special background required. Recommended for language studies students.)

Phil. 323 POLITICAL PHILOSOPHY 3 cr.

The political thought of such major classical theorists as Plato, Aristotle, Cicero, Augustine, Aquinas, Hobbes, Rousseau, Locke, Marx, and Mill, examined against the background of metaphysical roots from which their political views derive.

Phil. 324 HISTORY OF PHILOSOPHY I 3 cr.

Prerequisite: Phil. 120 or departmental permission.
Western philosophy of the pre-Socratic, classical Greek, Roman and medieval periods. Special attention will be given to Plato, Aristotle, Augustine, and Aquinas, as well as the philosophic schools.

*Ancillary program in religious studies.

Phil. 325 HISTORY OF PHILOSOPHY II 3 cr.

Prerequisite: Phil. 120 or departmental permission.
A continuation of Phil 324, beginning with 15th century Rennaissance thought and ending with the 19th century precursors of contemporary philosophies.

Phil. 327 AMERICAN PHILOSOPHIC THOUGHT 3 cr.

Prerequisite: Phil. 120 or departmental permission.
A study of the more original and influential philosophic postures developed in America from the colonial period to the present, and of the thinkers who gave them their most complete expressions.

Phil. 328 AESTHETICS 3 cr.

The meaning of aesthetics as a philosophical discipline; methodological questions; a classification of problem areas; questions of imitation, history and art, the artist, the audience; consideration of some of the major western and non-western writers' positions. The nature of artistic creativity; art and anarchy; chance and art; the definition of art in the present culture.

Phil. 329 PHILOSOPHY OF RELIGION 3 cr.

Philosophical problems in religious thought: the nature of religious experience, mysticism, defining "religion," conceptions of deity, the existence of God, the meaning of religious language, faith, and knowledge.

Phil. 330 PHILOSOPHY OF SCIENCE 3 cr.

An investigation into the nature of formal and empirical sciences: the structure of scientific thought and its dependence upon or independence of theory; the logical and metaphysical status of scientific "laws" and theoretical concepts; reductionism in science; the concept of causality; the logic of explanation; problems in confirmation theory; science and value.
(No special background required. Recommended for math and science majors.)

Phil. 340 CONTEMPORARY WESTERN RELIGIOUS THOUGHT* 3 cr.

An introduction to the thought of such contemporary theologians as Bonhoeffer, Buber, Bultmann, Kierkegaard, Teilhard, Tillich, Barth, Brunner and Niebuhr.

Phil. 410 CONTEMPORARY PHILOSOPHY 3 cr.

A survey in depth of the 20th century philosophic scene; to include logical positivism, logical and linguistic analysis, existentialism and phenomenology.

Phil. 420 METAPHYSICS 3 cr.

Divergent views of the subject's nature and of the main questions which it raises; being, form, substance, unity, mind, existence, necessity, possibility, time, eternity, space, and the self.

*Ancillary program in religious studies.

Phil. 421 EPISTEMOLOGY 3 cr.

An investigation into the problems involved in justifying knowledge claims and a consideration of the methods suggested for their resolution. Particular attention will be paid to the problems of certainty, objectivity, perception and truth.

Phil. 430 HONORS THESIS (Majors Only) 3 cr.

Independent research, culminating in a paper of thesis quality to be defended orally. Topic and advisor must be selected prior to the semester in which the course is scheduled. Four copies of the final draft must be on the advisor's desk two weeks before the final examination period.

PHYSICS DEPARTMENT

RICHARD E. BERRY, CHAIRMAN; BUCKWALTER, EDDY, FOX, GAGGINI, HERSHMAN, MATOLYAK, MATOUS, McNAMARA, NOZ, RAMSEY, REIBER, RIBAN, R. D. ROBERTS, WHITSON.

The Physics Department aims to fully prepare qualified young men and women for careers in physics. Two degrees are offered within the School of Arts and Sciences: the Bachelor of Science in Physics and the Bachelor of Arts in Physics. Each of these is adequate preparation for those wishing to enter a graduate program in physics or wishing to pursue research in industrial technology or for those wishing a strong physics background before aiming at their direct goal of medical research, air pollution control, etc. Two degrees are provided within the School of Education, the Bachelor of Science in Education with a Physics major and the Bachelor of Science in Education with a Physics-Mathematics major. The Department also provides a minor in Physics, as well as general science courses for those who wish to be truly liberally educated with a working knowledge of the rudiments of physical science.

CURRICULA

Core Program

Requirements for ALL Physics programs are 18 credits in Physics and 18 credits in Mathematics as follows:

Physics	
*Phys 131 — Physics I-C	3 cr.
*Phys 132 — Physics II-C	3 cr.
*Phys 141 — Physics I-C Laboratory	1 cr.
*Phys 142 — Physics II-C Laboratory	1 cr.
Phys 222 — Mechanics I	2 cr.
Phys 242 — Optics	3 cr.
Phys 322 — Electricity and Magnetism I	2 cr.
Phys 331 — Modern Physics	3 cr.
Phys 350 — Intermediate Experimental Physics I	3 cr.
Mathematics	
*Math 017 — Calculus I for Physics	4 cr.
*Math 019 — Calculus II for Physics	4 cr.
Math 471 — Introduction to Applied Math	4 cr.
Math 361 — Ordinary Differential Equations.	3 cr.

*Or appropriate substitute.

CSci 100 – Introduction to Computers
or
CSci 110 – Introduction to Computer Science 3 cr.

B. S. in Physics

In addition to the Core Program, requirements for the degree of Bachelor of Science in Physics are 24 more credits in Physics and 3 more credits in Mathematics, as follows:

Physics

Phys 223 – Mechanics II	2 cr.
Phys 231 – Electronics	4 cr.
Phys 242 – Optics	3 cr.
Phys 323 – Electricity and Magnetism II	2 cr.
Phys 342 – Thermal and Statistical Physics	3 cr.
Phys 351 – Interm. Exp. Physics II	3 cr.
Phys 483 – Quantum Mechanics I	4 cr.
Phys 472 – Nuclear Physics	
or	
Phys 490 – Solid State Physics	3 cr.
Physics Elective	3 cr.

Mathematics. One of the following:

Math 233 – Intro to Linear Algebra	3 cr.
Math 363 – Introduction to Probability	3 cr.
Math 381 – Advanced Calculus I	3 cr.
Math 423 – Complex Variables I	3 cr.
CSci 250 –Intro to Numerical Methods	3 cr.

B. A. in Physics

In addition to the Core Program, requirements for the degree of Bachelor of Arts in Physics are 18 more credits in Physics as follows:

Physics

Phys 223 – Mechanics II	2 cr.
Phys 231 – Electronics	4 cr.
Phys 323 – Electricity and Magnetism II	2 cr.
Phys 351 – Interm Exp. Physics II	3 cr.
Phys 483 – Quantum Mechanics I	4 cr.
Physics Elective	3 cr.

In addition, students are required to complete a two-semester Natural Science sequence other than Physics and a two-semester advanced Social Science or a two-semester advanced Natural Science sequence.

B. S. in Education (Physics Major)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a Physics major are 10 more credits in Physics and 8 credits in Chemistry as follows:

Physics

Phys 231 – Electronics	4 cr.
Phys 242 – Optics	3 cr.
Physics Elective	3 cr.

Chemistry

Chem 111-112 – General Chemistry I and II	4 cr. each

B.S. in Education (Physics -- Mathematics Major)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a combined Physics-Mathematics major are 6 more credits in Physics and 12 more credits in Mathematics, as follows:

Physics

Phys 242 – Optics	3 cr.
Physics Electives	3 cr.

Mathematics

Math 231 – Intro to Algebraic Structures	3 cr.
Math 233 – Intro to Linear Algebra	3 cr.
Math 355 – Foundations of Geometry I	3 cr.
Math 381 – Advanced Calculus I	3 cr.

Minor in Physics

To minor in Physics, a student must offer 15 credits in Physics.

COURSE DESCRIPTIONS

Phys 111 PHYSICS I 3 cr.

Prerequisites: Elementary algebra and trigonometry.
General college physics; mechanics, wave motion, and sound. Three hours lecture per week.

Phys 112 PHYSICS II 3 cr.

Prerequisite: Physics 111.
Electricity and magnetism, heat, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum theory. Three hours lecture per week.

*Phys 121 PHYSICS LABORATORY I 1 cr.

Physics laboratory at the level of Physics I; exercises in mechanics, wave motion, and sound. Three hours laboratory per week.

*Phys 122 PHYSICS LABORATORY II 1 cr.

Physics laboratory at the level of Physics II; exercises in optics, electricity and magnetism, and radioactivity. Three hours laboratory per week.

*Physics 121, 122, 141, 142 also satisfy the General Education requirement for a laboratory science.

Phys 131 PHYSICS I-C 3 cr.

Prerequisites: Math 013, 017, or 111, at least concurrently.
A calculus-based course in general college physics; topics covered are similar to those covered in Physics 111, but are treated in more depth through the use of calculus. Three hours lecture per week.

Phys 132 PHYSICS II-C 3 cr.

Prerequisites: Math 015, 019, or 113, at least concurrently.
Continuation of Physics I-C; topics covered are similar to those covered in Physics II, but are treated in more depth through the use of the calculus. Three hours lecture per week.

*Phys 141 PHYSICS LABORATORY I-C 1 cr.

Sequence of physics laboratory at the same level as Physics I-C; exercises in mechanics, wave motion, sound and kinetic theory. Three hours laboratory per week.

*Phys 142 PHYSICS LABORATORY II-C 1 cr.

Sequence of physics laboratory at the same level as Physics II-C; exercises in optics, electricity and magnetism, and radioactivity. Three hours laboratory per week.

Phys 222 MECHANICS I 2 cr.

Prerequisites: Phys 111 or 131; Math 015, 019, or 113.
Dynamics of a particle in one, two and three dimensions, central forces including planetary and satellite motion, energy in particle dynamics, statics, systems of particles. Two hours lecture per week.

Phys 223 MECHANICS II 2 cr.

Prerequisites: Phy 222, Math 071 or Math 361.
Mechanics of a rigid body, constraints, oscillations, wave motion, introduction to Lagrangian and Hamiltonian formulation and relativistic mechanics. Two hours lecture per week.

Phys 231 ELECTRONICS 4 cr.

Prerequisites: Physics 112 or 132; Math 015, 019 or 113.
Circuit theory, transients, vacuum-tube and transistor circuits, frequency response, input and output impedance, feedback and electronic noise. Three hours lecture, 3 hours laboratory per week.

Phys 242 OPTICS 3 cr.

Prerequisites: Physics 112 or 132; Math 015, 019 or 113.
Geometrical optics, physical optics, including interference, dif-

fraction and polarization. Quantum Optics is introduced. Three hours lecture per week.

Phys 322 ELECTRICITY AND MAGNETISM I 2 cr.

Prerequisite: Phys 222.
Electrostatic potential theory, dielectries, dipole theory, magnetostatics, Maxwell's equation for static fields, and Legendre's polynomials and other approximation methods. Two hours lecture per week.

*Physics 121, 122, 141, 142 also satisfy the General Education requirement for a laboratory science.

Phys 323 ELECTRICITY AND MAGNETISM II 3 cr.

Prerequisite: Phys 322.
Time-dependent form of Maxwell's equations, electromagnetic induction, vector potential, magnetism, radiation fields, and poynting vector. Three hours lecture per week.

Phys 331 MODERN PHYSICS 3 cr.

Prerequisites: Phys 112 or 132; Math 015, 019, or 113.
Introduction to the particle and wave properties of matter, atomic structure, relativity, solid state and nuclear physics. Three hours lecture per week.

Phys 342 THERMAL AND STATISTICAL PHYSICS 3 cr.

Prerequisites: Phys 112 or 132, Math 015, 019, or 113.
Thermometry, the laws of thermodynamics, low-temperature physics, entropy, the properties of ideal gas, and an introduction to statistical mechanics. Three hours lecture per week.

Phys 350 INTERMEDIATE EXPERIMENTAL PHYSICS I 3 cr.

Prerequisites: Phys 242 and 331.
Required fundamental experiments in the areas of mechanics, optics, modern physics and heat. Six hours laboratory per week.

Phys 351 INTERMEDIATE EXPERIMENTAL PHYSICS II 3 cr.

Prerequisite: Phys 350.
Increasingly sophisticated experiments in the essential areas of physics. Analog and digital computers and the Van de Graaff are available. Three hours lecture per week.

Phys 421 SELECTED EXPERIMENTS I 3 cr.

Prerequisites: Phys 231 and 331.
Experiments selected from advanced optics, microwaves, radio and optical astronomy, semiconductor properties, cryogenics, and classic experiments in atomic physics. Six hours laboratory per week.

Phys 422 SELECTED EXPERIMENTS II 3 cr.

Prerequisites: Phys 231 and 331.
Includes experiments selected from the following topics: Mossbauer effect, laser modulation, magnetic resonance, cosmic rays,

and classic experiments in nuclear physics. Six hours laboratory per week.

Phys 432 ADVANCED ELECTRONICS 3 cr.

Prerequisite: Phys 231.
Digital Measurement, Switching Circuit, Logic circuits, Counting, Coding, Input and Output, AD and DA converters, Computer organization. Two hours lecture, 3 hours laboratory per week.

Phys 472 NUCLEAR PHYSICS 3 cr.

Prerequisite: Phys 331.
Survey of nuclear physics; nuclear size; nuclear mass, reaction theory, types of radioactive decay, nuclear models, nuclear forces and elementary particles. Three hours lecture per week.

Phys 483 QUANTUM MECHANICS I 4 cr.

Prerequisites: Phys 222 and 331.
Quantum mechanics following the method of Schrodinger; the theory is applied to the properties of the harmonic oscillator, the hydrogen atom, the electron in a magnetic field and the radioactive decay of alpha particles. Four hours lecture per week.

Phys 484 QUANTUM MECHANICS II 3 cr.

Prerequisite: Phys 483.
A sequel to Phys 483. The general principles of quantum mechanics are further developed. Matrix mechanics, angular monentum theory, time-independent perturbations, variational methods, spin, and introduction to the many-body problem. Three hours lecture per week.

Phys 490 SOLID STATE PHYSICS 3 cr.

Prerequisites: Phys 223 and 331.
Reciprocal lattice, crystal structure, the quantization of fields to produce quasi-particles such as phonons, magnons, excitons. Fermi gas of electrons, energy bands, semiconductor crystals, and photoconductivity. Three hours lecture per week.

Phys 498 PROBLEMS IN PHYSICS 1-4 cr.

Prerequisites: Phys 112 or 132; Math 013, 017, or 111.
Students select from topics such as: Physics education projects, spectrum analysis, cosmic rays, digital and analog computer applications, astrophysics, Van de Graaff accelerator experiments, cryogenics and electro-paramagnetic resonance.

General Education Courses

Sci 105 PHYSICAL SCIENCE I 4 cr.

The physical world is studied by focusing on the concepts of matter and energy; emphasis is on physical phenomena that can be explained by Physics and Astronomy. Three hours lecture, 2 hours laboratory per week.

Sci 106 PHYSICAL SCIENCE II 4 cr.

See course descriptions in Chemistry Department section.

Sci 401 THE GROWTH OF SCIENCE AND ITS CONCEPTS I 3 cr.

Traces the development of science concepts and their interaction with the growing society of Western Civilization, from the earliest beginnings to the time of Newton. Treatment is non-mathematical. Three hours lecture per week.

Sci 402 THE GROWTH OF SCIENCE AND ITS CONCEPTS II 3 cr.

Influence and development of concepts of Science in Western Civilization are studied from Newton to the present time; stress placed on the non-mathematical understanding of the basic ideas. Three hours lecture per week.

Ed 457 TEACHING PHYSICS IN THE SECONDARY SCHOOL 3 cr.

Provides the foundation for a prospective secondary school physics teacher in the area of current professional practices, curriculum, and methods.

POLITICAL SCIENCE DEPARTMENT

RICHARD F. HEIGES, CHAIRMAN; CARONE, CHASZAR, GREEN, KEENE, KRITES, LEE, MORRIS, PALMER, PLATT, SMITH, THORPE, WILSON.

Political Scientists focus upon political systems, including the effect of environment on the system, system inputs, the decision-making agencies which render binding public policies, and system outputs. Approaches to the study of government and politics include: the NORMATIVE approach, in which philosophical attention centers on values by asking the question, "What ought to be?"; and the BEHAVIORAL approach, in which an attempt is made to develop verifiable theories through scientific methods by asking the questions, "how" and "why?"

Students majoring in Political Science find employment as public school teachers and also opportunities, usually through civil service examinations, in federal, state, and local governments, and with private civic groups, interest groups, and political groups. Students who go on to graduate work find appointments at higher levels and in college teaching. Students majoring in Political Science, as in any of the Social Sciences, furthermore, are in demand by employers in business and industry.

The Political Science major is also especially suitable for the pre-law student.

Degrees offered by the Political Science Department are the Bachelor of Arts in Political Science and the Bachelor of Science in Education with a Social Science Major, concentrating on Political Science. The first degree program is under the School of Arts and Sciences, and the second is under the School of Education. The Department also offers a minor in Political Science.

CURRICULA

Core Program

Required of ALL Political Science majors and minors are 6 credits in the following basic courses:

PolS 111 — American Politics (formerly American Citizenship) 3 cr.
IS 101 — World Politics 3 cr.

B.A. in Political Science

In addition to the Core Program, requirements for the Bachelor of Arts in Political Science are 24 more credits in Political Science, distributed so that at least one course is in three of the following four areas: American Studies, Political Theory, Public Administration, and International Studies. Students preparing for graduate study should take PolS 499 — Scope and Methods, at least one Political Theory course, and courses in Computer Science and Statistics.

B.S. in Education (Political Science Concentration)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a major in Social Science, Political Science concentration, are 9 more credits in Political Science. Recommended electives are PolS 250, 251, 350, 351, 353, or 354; desirable alternatives are PolS 280, 283, 352, 359, and 381-386.

Minor in Political Science

A minor in Political Science consists of 15 credits in Political Science, composed of the 6-credit Core Program and 9 more credits elected from all Political Science courses.

COURSE DESCRIPTIONS

Required Courses

PolS 111 AMERICAN POLITICS (FORMERLY AMERICAN CITIZENSHIP) 3 cr.

Introduction to American national government and politics, emphasizing the Constitution, the Party system, the Congress, the Presidency, the Courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.

IS 101 WORLD POLITICS 3 cr.

Analysis of the contemporary (Post 1945) state system and the forces shaping the world in which the student lives. The student is given a framework within which he can analyze contemporary international politics.

American Studies

PolS 250 CONTEMPORARY POLITICAL PROBLEMS 3 cr.

Emphasizes the dynamics of government as they are evidenced in public opinion, pressure groups, political parties and our governmental institutions; attention also directed toward the political-economic nexus within American society.

PolS 251 STATE AND LOCAL POLITICAL SYSTEMS 3 cr.

Institutions and processes of state and local governments, with special attention to Pennsylvania; emphasis on the nature of federalism, state constitutions, and role of state and local government in an urban society.

PolS 298-299 NEW INTERPRETATION 1 cr. each

Course designed to provide students with techniques for intelligent reading of the daily newspaper and weekly news magazines and to give some understanding of current affairs at the state, national and international levels.

PolS 350 THE PRESIDENCY 3 cr.

Examination of the Office of President, with attention to constitutional foundations, evolution, structure, powers, and functions; some comparisons between presidential and parliamentary systems and between the offices of President and Governor.

PolS 351 LEGISLATIVE PROCESS 3 cr.

Functional study of legislative bodies and the process of legislation, covering the organization of legislative assemblies, operation of the committee system, procedures, bill drafting, aids, and controls over legislation.

PolS 352 PUBLIC OPINION 3 cr.

Study of the nature of public opinion within the political system; attention to the formation of public opinion, expression, propaganda, mass media, and interest groups.

PolS 353 AMERICAN POLITICAL PARTIES 3 cr.

The role of people, parties, and pressure groups in the politics of American democracy; attention to sectional and historic roots of national politics, voting behavior, pressure group analysis, and campaign activities.

PolS 354 METROPOLITAN PROBLEMS 3 cr.

Analyzes the multiplicity of problems facing our metropolitan areas. Contemporary developments such as urban renewal, and shrinking tax base, federal aid to cities, subsidized mass transit, municipal authorities, and political consolidation are examined.

PolS 355 INTERGOVERNMENTAL RELATIONS 3 cr.

Explores the characteristics of federal systems of government, with emphasis on theories, origins, institutions, problems in intergovernmental relations in the United States, federal systems in other nations, and trends.

PolS 358 JUDICIAL PROCESS 3 cr.

Explores the nature and limits of judicial power, the courts as policy-making bodies, the selection of judges, the decision process, the external forces impinging on the courts, and the role of the Supreme Court in its relationship with Congress, the Presidency, and federalism.

PolS 359 CONSTITUTIONAL LAW AND CIVIL LIBERTIES 3 cr.

Study of civil liberties and civil rights issues through leading Supreme Court decisions; topics treated include First Amendment rights, procedural due process and the Bill of Rights, and Equal Protection problems in civil rights.

Political Theory

PolS 360 POLITICAL PHILOSOPHY 3 cr.

Evolution of the Western political tradition of Constitutionalism from Plato and Aristotle to Locke and Montesquieu: religious and rational foundations; medieval theories of authority and representation; early modern theories of the state and sovereignty; concepts of law; natural rights, liberty and equality, and justice treated in detail.

PolS 361 MODERN POLITICAL THOUGHT 3 cr.

Development of Western political thought since the mid-16th century: classic liberalism; conservative thought; modern irrational ideologies such as fascism and national socialism; socialist thought; contemporary collectivist liberalism.

Public Administration

PolS 370 PUBLIC ADMINISTRATION 3 cr.

Theories of organization and structural organization, personnel processes, executive functions, financial administration, the politics of administration, public relations, and problems of democratic control of bureaucracy.

PolS 371 FEDERAL ADMINISTRATIVE POLICY 3 cr.

Intensive study of the role of Federal agencies and their administrators in determining and developing public policy. Public administration in practice is emphasized by utilizing case studies.

International Studies

PolS 280 COMPARATIVE GOVERNMENT 3 cr.

Analyzes the major foreign political systems, with emphasis upon Contemporary Europe, including the Soviet Union. Authoritarian and democratic systems are compared. Should be scheduled before PolS 380-389.

PolS 281 INTERNATIONAL RELATIONS 3 cr.

Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states.

PolS 282 INTERNATIONAL LAW AND ORGANIZATIONS 3 cr.

Analysis of the nature and function of international law in the relations among nations, and an inquiry into the purposes, structures, and actions of contemporary international political organizations, with emphasis on the United Nations.

PolS 283 AMERICAN FOREIGN POLICY 3 cr.

Examines the formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.

PolS 380 SOVIET POLITICS 3 cr.

Essential features of the Communist party and government of the U.S.S.R., including geographical and historical background and ideological and theoretical foundations. PolS 280, Comparative Government, should be taken prior to this course.

PolS 381-386 POLITICAL SYSTEMS 3 cr. each

Intensive, comparative study of the government and politics of a selected region. Suggested prerequisite: PolS 280.

PolS 381 – Latin America
PolS 382 – Africa
PolS 383 – Asia
PolS 384 – Middle East
PolS 385 – Central and Eastern Europe
PolS 386 – Atlantic Community

PolS 389 DEVELOPING NATIONS 3 cr.

Political characteristics of the emerging nations; the impact of economic and social change upon political structure; evolving patterns of political development; and techniques of nation-building. Suggested prerequisite: PolS 280.

Research, Study, and Methodology

PolS 401-402 READINGS 3 cr. each

Readings and brief written assignments on a specific topic determined by the instructor in charge.

PolS 410 HONORS IN POLITICAL SCIENCE 3 cr.

Prerequisites: 15 credits in Social Sciences, including 9 credits in Political Science, 2.0 QPA in Social Studies, and permission of Department Chairman and instructor.
Directed readings and one or more papers; topic to be selected by instructor and student.

PolS 458-459 POLITICAL SCIENCE INTERNSHIP 3 cr. each

Prerequisites: 9 credits in Political Science with 2.0 QPA; PolS 111; approval of instructor and Chairman.
Practical experience in government and politics. Course grade determined by the instructor.

PolS 499 SCOPE AND METHODS 3 cr.

Prerequisite: PolS 111.
Explores approaches, methods, and tools of Political Science; designed to prepare the student who plans to do graduate work in Political Science. Majors and Minors only.

PSYCHOLOGY DEPARTMENT

RICHARD D. MAGEE, CHAIRMAN; BARNETT, CARTWRIGHT, EDGAR, GROVER, JACOBS, LORE, PATTON, RADAKER, REID, RITTLE, ROSS, L. SARGENT, SCHNEIDER, STIRES, THORNTON, VANDECREEK, WALZ
ADJUNCT PROFESSORS: KLINEDINST, PLUMMER, RUSNAK

The program in psychology leads to a Bachelor of Arts degree and is designed to provide the student with an understanding of the methods and major findings of the science of behavior, with an introduction to several areas of professional application. The major offers the background required for graduate work in psychology and preparation for such related fields as social work, personnel work, advertising, medicine, law, and theology. The department also offers a minor in Psychology.

CURRICULA

B.A. in Psychology

The major in psychology consists of a minimum of eleven courses, including Psy 101 – General Psychology and Math 362 – Probability and Statistics, both of which can be used to meet General Education requirements, and Experimental Design and Analysis I and II. At least two courses must be taken from Group A and two courses from Group B below. The remaining three course choices are not restricted.

Course Group A

Psy 361 – Motivation	3 cr.
Psy 362 – Physiological Psychology	3 cr.
Psy 363 – Perception	3 cr.
Psy 365 – Conditioning and Learning	3 cr.
Psy 366 – Human Learning and Memory	3 cr.
Psy 380 – Animal Behavior	3 cr.

Course Group B

Psy 351 – Intro. to Psych. Measurement	3 cr.
Psy 354 – Developmental Psychology	3 cr.
Psy 357 – Abnormal Psychology	3 cr.
Psy 356 – Personality	3 cr.
Psy 358 – Social Psychology	3 cr.

Suggested Course Sequence for Psychology Majors

Freshman Year

First Semester	Psy 101 – General Psychology
Second Semester	Math 362 – Probability & Statistics

Sophomore Year	
First Semester	Psy 290 – Experimental Design & Analysis I
Second Semester	Psy 291 – Exp. Design & Analysis II
Junior Year	
First Semester	One course from Group A One course from Group B
Second Semester	One course from Group A One course from Group B
Senior Year	At least three additional courses in Psychology

Minor in Psychology

A minor in psychology consists of 15 credits in the Department. A specific program of courses is designed for each student in cooperation with his major adviser.

COURSE DESCRIPTIONS

Psy 101 GENERAL PSYCHOLOGY 3 cr.

An introduction to the scientific study of behavior.

Psy 200 THE PSYCHOLOGY OF ADJUSTMENT 3 cr.

Prerequisite: Psy 101.
Course is designed to present the fundamental concepts of psychological adjustment. Emphasis is on preventive approaches to maladjustment and psychological disorders. (Cannot be used to meet requirements for major in Psychology.)

Psy 290 EXPERIMENTAL DESIGN AND ANALYSIS I 3 cr.

Prerequisites: Psy 101, Math 362.
A laboratory course devoted to designing, conducting and evaluating the results of psychological experiments.

Psy 291 EXPERIMENTAL DESIGN AND ANALYSIS II 3 cr.

Prerequisites: Psy 101, 290.
A continuation of Experimental Design and Analysis I.

Psy 351 INTRODUCTION TO PSYCHOLOGICAL MEASUREMENT 3 cr.

Prerequisite: Psy 101.
Survey of psychological measurement techniques, with emphasis on the theoretical assumptions underlying these techniques and discussion of the interpretation and limitations of the measuring instruments.

Psy 354 DEVELOPMENTAL PSYCHOLOGY 3 cr.

Prerequisite: Psy 101.
Comprehensive study of all the factors that contribute to human

development from conception to death, particularly as they relate to the psychological development of individual.

Psy 356 PERSONALITY 3 cr.

Prerequisite: Psy 101.
Provides comparative analysis of the major representative traditional and contemporary theories of personality.

Psy 357 ABNORMAL PSYCHOLOGY 3 cr.

Prerequisite: Psy 101.
Abnormal behavior is studied from statistical, normative, and pathological reference point.

Psy 358 SOCIAL PSYCHOLOGY 3 cr.

Prerequisite: Psy 101.
Scientific approach to the study of the behavior and experience of individuals in relation to other individuals, groups, and cultures.

Psy 361 MOTIVATION 3 cr.

Prerequisites: Psy 101, 290, 291.
Systematic study of how behavior is initiated, sustained, directed, and terminated. Lecture and laboratory.

Psy 362 PHYSIOLOGICAL PSYCHOLOGY 3 cr.

Prerequisites: Psy 101, 290, 291.
Study of the relationship between behavior and the anatomy and physiology of the nervous system. Lecture and laboratory.

Psy 363 PERCEPTION 3 cr.

Prerequisites: Psy 101, 290, 291.
Study of the perceptual process. Sensory mechanisms for processing information are examined, as well as responses to complex stimuli. Lecture and laboratory.

Psy 365 CONDITIONING AND LEARNING 3 cr.

Prerequisites: Psy 101, 290, 291.
Examination of basic principles of learning and related phenomena; discussion of classical conditioning, discrimination learning and aversive control of behavior. Lecture and laboratory.

Psy 366 HUMAN LEARNING AND MEMORY 3 cr.

Prerequisites: Psy 101, 290, 291.
Study of the methods and findings in the areas of verbal learning and retention, encoding, storage, and retrieval processes. Lecture and laboratory.

Psy 370 CHILD PSYCHOLOGY 3 cr.

Prerequisite: Psy 101.
Study of factors that influence the total development and behavior of the child. Current theories and research are considered, with focus upon optimum development of the individual.

Psy 373 ADOLESCENT PSYCHOLOGY 3 cr.

Prerequisite: Psy 101.
Study of the adolescent and his world, especially the physical

aspects of adolescence, psychological growth patterns, social pressures and adaptation.

Psy 374 PSYCHOLOGY OF ADULTHOOD AND OLD AGE 3 cr.

Prerequisite: Psy 101.
Examines developmental and psychological needs of young adult, the middle-aged and the elderly, in the light of current theory and research.

Psy 380 ANIMAL BEHAVIOR 3 cr.

Prerequisites: 101, 290, 291.
Comparative survey of behavioral processes, with emphasis on sensory systems and learning, in organisms of different phylogenetic levels. Lecture and laboratory.

Psy 390 HISTORICAL TRENDS IN PSYCHOLOGY 3 cr.

Prerequisite: Psy 101.
Comprehensive overview of the historical antecedents of contemporary psychology.

Psy 400 INDUSTRIAL PSYCHOLOGY 3 cr.

Prerequisite: Psy 101.
Systematic study of the applications of psychology to business and industry.

Psy 450 INTRODUCTION TO CLINICAL PSYCHOLOGY 3 cr.

Prerequisites: Psy 101 and Department consent.
Overview of clinical psychology, with emphasis upon the clinician's use of methods of evaluation, and the treatment and modification of behavior.

Psy 451 PSYCHOLOGICAL PRACTICUM 3 cr.

Prerequisites: Psy 101 and Department consent.
Under the supervision of the Psychology Department, selected students receive experience in the application of psychological techniques. May be taken twice for credit.

Psy 470 RESEARCH SEMINAR PSYCHOLOGY 3 cr.

Prerequisites: Psy 290, 291 and Department consent.
A tutorial exposure to experimentation in Psychology.

Psy 471 SPECIAL TOPICS IN PSYCHOLOGY 2-3 cr.

Prerequisites: Psy 101 and Department consent.
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum of 6 credits.

Psy 472 INDEPENDENT STUDY IN PSYCHOLOGY 1-3 cr.

Prerequisites: Psy 101 and Department consent.
Individual students pursue their particular interests in Psychology in consultation with a member of the staff. May be taken more than once to a maximum of 6 credits.

SOCIOLOGY-ANTHROPOLOGY DEPARTMENT

D. M. AZIMI, CHAIRMAN; ARCHIBALD, BENTON, GERALD, GRANT, KRAUS, LANHAM, LEVENSON, LOUDEN, OLIN-FAHLE, RAWLEIGH, VEXLER.

The Sociology-Anthropology Department provides an opportunity for studies in two closely related disciplines. Although a student may elect to concentrate his studies in one area more than another, studies in both disciplines are recommended. Sociology and Anthropology are both concerned with man's social and cultural setting and the nature of his relationships with his fellow men. Sociology focuses primarily on studies of our own society, whereas Anthropology is mainly concerned with non-Western cultures.

Sociology-Anthropology training can be preparatory for a variety of vocations. Teaching in secondary schools or in colleges and universities are vocations of interest to many students. Social work is an area of increasing opportunities. Anthropologists find employment opportunities primarily in higher education, museum work, and in civil service positions. Students planning future studies in theology, law, personnel management or other human relations occupations will find that undergraduate training in Sociology and Anthropology is eminently appropriate.

Degrees offered by the Department are the Bachelor of Arts in Sociology-Anthropology, with concentration in either Sociology or Anthropology, the Bachelor of Science in Education with a major in Social Sciences, concentrating on Sociology. The first degree program is under the School of Arts and Sciences, and the second is under the School of Education. The Department also offers a minor.

CURRICULA

A major in Sociology-Anthropology requires a total of 27 credits in the Department, including courses noted on the next page.

Core Program

All programs require 6 credits of Core Program, as

follows:

Soc.	151	Principles of Sociology	3 cr.
Anth.	110	Introduction to Anthropology	3 cr.

B. A. with Concentration in Sociology

In addition to the Core Program requirements for the degree of Bachelor of Arts with a concentration in Sociology are 21 credits in Sociology, distributed as follows:

Required Courses:

Soc. 231	Contemporary Social Problems	3 cr.
Soc. 343	Development of Social Theory	3 cr.
Soc. 344	Introduction to Social Research	3 cr.
Sociology Electives		12 cr.

B. A. with Concentration in Anthropology

In addition to the Core Program, requirements for the Degree of Bachelor of Arts with a concentration in Anthropology are 21 credits in Anthropology, distributed as follows:

Required Courses:

Anth. 211	Cultural Anthropology	3 cr.
Anth. 222	Introduction to Physical Anthropology	3 cr.
Anth. 233	Cultural Symbolism I: Language in Culture	3 cr.
Anth. 244	Basic Archaeology	3 cr.
Anthropology Electives		12 cr.

B. S. in Education (Sociology Concentration)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with a major in Social Science, Sociology concentration, are 9 more credits in Sociology, at the student's choice.

Minor in Sociology or Anthropology

A minor in Sociology or Anthropology consists of 15 credits in either discipline composed of the 6-credit Core Program and 9 more credits, elected from either Sociology or Anthropology courses.

COURSE DESCRIPTIONS

Sociology Courses

Soc. 151 PRINCIPLES OF SOCIOLOGY 3 cr.

The science of the structure and functioning of human groups; taking culture and social institutions as basic materials, studies seeking to record and explain man's social behavior are explored.

Soc. 231 CONTEMPORARY SOCIAL PROBLEMS 3 cr.

Prerequisite: Soc. 151.
Explores pressing social issues; problems are defined and solutions are explored in the light of historical, political, economic, social, and anthropological data.

Soc. 262 MODERN SOCIAL INSTITUTIONS 3 cr.

Prerequisite: Sophomore standing or higher.
Focuses on modern social institutions, such as science and technology, the arts, industry, etc., and their place in society. Readings, assignments, and topics of discussion determined by the instructor.

Soc. 332 RACIAL AND CULTURAL MINORITIES 3 cr.

Prerequisite: Soc. 151.
Study of national, racial and religious minorities and divergent heritages in our national life.

Soc. 333 JUVENILE DELINQUENCY 3 cr.

Prerequisite: Soc. 151.
Study of some of the social and cultural factors that relate to delinquency; emphasis on the consequences of societal reaction to delinquency.

Soc. 334 POPULATION PROBLEMS 3 cr.

Prerequisite: Soc. 151.
Focus upon population growth and distribution; the present "population explosion" is a topic of central interest.

Soc. 335 SOCIAL STRATIFICATION 3 cr.

Prerequisite: Soc. 151.
Study of social status patterns and social mobility; determinants of social class divisions and the consequences of class distinction for individuals and society are discussed.

Soc. 336 SOCIOLOGY OF THE FAMILY 3 cr.

Prerequisite: Soc. 151.
Sociological study of the family from various theoretical view points; emphasis is on the interrelation between structure and function of the family and the existing and emerging social environment.

Soc. 337 WORLD CULTURES 3 cr.

A minimal orientation to the study of cultural diversity in human societies; emphasis is on the determinates of cultural variability and the problem of ethnocentrism. Not open to Sociology -

Anthropology majors in liberal arts. Recommended for Social Science Education students who concentrate in Sociology-Anthropology.

Soc. 338 INTRODUCTION TO SOCIAL WORK 3 cr.

Prerequisite: Soc. 151.
Principles of social work; their application to problems of family and child welfare; casework and group techniques.

Soc. 339 THE COMMUNITY 3 cr.

Prerequisite: Soc. 151.
Analysis of the social structure of communities of the local level in relation to the national community structure; examination of current problems and future trends.

Soc. 340 INDUSTRIAL SOCIOLOGY 3 cr.

Prerequisite: Soc. 151.
Work and the milieu of the worker; social organizations in industry; problems of the workers; industrial morale and teamwork; and the relation of industry to the community and society.

Soc. 341 SOCIOLOGY OF EDUCATION 3 cr.

Prerequisite: Soc. 151.
A sociological approach to understanding the role of educational institutions in American society, with special emphasis on the status and role of the public school teacher.

Soc. 342 SOCIAL AND CULTURAL ASPECTS OF HEALTH AND MEDICINE 3 cr.

Prerequisite: 6 credits in Sociology-Anthropology.
Review of the fields of medical sociology and anthropology; attention focused on such topics as social background of illness, folk medicine, cultural differences in perceptions of illness, and social organization of health facilities.

Soc. 343 DEVELOPMENT OF SOCIOLOGICAL THEORY 3 cr.

Prerequisite: 9 credits in Sociology-Anthropology.
Overview and discussion of the development of concepts and theories of human social behavior; prominent contributions to the mainline of sociological thinking are examined.

Soc. 344 INTRODUCTION TO SOCIAL RESEARCH 3 cr.

Prerequisite: Soc. 151.
Overview of basic quantitative methods, survey and interview techniques, and general problems of research design. Brief problems and projects are assigned.

Soc. 345 SOCIAL DYNAMICS 3 cr.

Prerequisite: Soc. 151.
Study of interaction between and among individuals and groups in various social settings; emphasis placed on small groups, socialization, collective behavior, and mass communications.

Anth. 320 ARCHAEOLOGICAL FIELD SCHOOL 6 cr.

Prerequisite: Anth. 110 or 244.
Field excavation of selected archaeological sites in Indiana and adjacent counties; opportunity for varied experience in historic and prehistoric Indian sites, both open sites and rock shelters.

Anth. 321 METHODS OF CROSS-CULTURAL ANAYLSIS 3 cr.

Prerequisite: Anth. 110 or 211.
Comparative methods and techniques will be reviewed and evaluated in relation to the problems they were designed to solve. Statistics and computational equipment will be used in the analysis of data derived from the Ethnographic Atlas or the Human Relations Area Files.

Anth. 371 CULTURAL AREA STUDIES 3 cr.

Prerequisite: Anth. 110 or 211.
Analysis of prehistoric, historic, and contemporary aspects of ethnological studies in a culture area; social organization, linguistic ties, cultural ecology, folklore, mythology, artistic expressions of the peoples, and their world view examined. The course may be repeated UNDER DIFFERENT LETTER DESIGNATIONS according to selection of culture areas by instructors responsible for the course.

THE FOLLOWING CULTURE AREAS ARE AVAILABLE INITIALLY:

Anth. 371A CULTURAL AREA STUDIES: NORTHERN EUROPE
Anth. 371B CULTURAL AREA STUDIES: SOUTHEAST ASIA
Anth. 371C CULTURAL AREA STUDIES: CHINA AND JAPAN
Anth. 371D CULTURAL AREA STUDIES: CARIBBEAN

Anth. 401 SOCIAL AND CULTURAL CHANGE 3 cr.

Prerequisites: Anth. 110 or Soc. 151 and Junior Standing or permission of instructor.
For description of course, see Soc. 401.

THE SCHOOL OF BUSINESS

ELWOOD B. SHEEDER, DEAN

The establishment of a School of Business was authorized by the Board of Trustees of Indiana University of Pennsylvania in May 1966, and it was indicated that the School should consist of several departments. At present, these are the Business and Distributive Education Department and the Business Management Department.

Degree programs offered by the School of Business are the Bachelor of Science in Education with a major in Business Education or with a major in Distributive Education and the Bachelor of Science in Business Management.

Business Education has been one of Indiana's areas of specialization for some 50 years. The program in Distributive Education prepares Teacher-Coordinators for schools offering programs in marketing, distribution and cooperative work experience. These two degree areas are designed to prepare teachers for comprehensive high schools, area vocational-technical schools, and community colleges. The Business Management program has as its primary purpose the preparation of students for careers in business and industry.

DEPARTMENTS

BUSINESS AND DISTRIBUTIVE EDUCATION

Those enrolled in this Department have a choice of the following areas of concentration; Accounting, Data Processing, Secretarial (all include certification in Typewriting),

Soc. 346 THE HISTORY AND PHILOSOPHY OF SOCIAL WELFARE POLICIES 3 cr.

Prerequisites: Introduction to Social Work, or approval of the instructor.
Beginning with the Elizabethan Poor Laws of early seventeenth century England and culminating in an examination of the "war on poverty," this course will appraise the manner by which competing philosophical perspectives have served to inform and been informed by the development of social welfare policies intended to remedy conditions of poverty in Western society. (Pending approval.)

Soc. 401 SOCIAL AND CULTURAL CHANGE 3 cr.

Prerequisite: Soc. 151 or Anth. 110 and junior standing or permission of the instructor.
Focused on the effects of innovations as they produce changes in society and cultural patterns; emphasis on technology, urbanization, ecological problems and underdeveloped countries. Students will be able to read in areas of special interest.

Soc. 451 SPECIAL READINGS IN SOCIOLOGY 3 cr.

Prerequisite: Soc 151 and permission of the instructor.
Readings on specific topics in sociology, with presentations and class discussions. Instructor guides selection of readings and presentations. This course may be taken twice for credit (with different instructors who present different topics.)

Soc. 471-472 FIELDWORK PROSEMINAR IN SOCIOLOGY 2-3 cr. each

Prerequisite: 9 credits (2.0 QPA or better) in Sociology, including Soc. 231 or 333. (For majors and minors only.)
Supervised practical experience in community work with cooperating public and private agencies. Given in summer.

Anthropology Courses

Anth. 110 INTRODUCTION TO ANTHROPOLOGY 3 cr.

General consideration of man's biological and cultural adaptations, stressing analysis of the nature of cultural systems as a method for perceiving and understanding variations among men today.

Anth. 211 CULTURAL ANTHROPOLOGY 3 cr.

Survey of problems and theories in the science of culture. Each student makes a study of a particular major anthropologist or theoretical approach.

Anth. 222 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 3 cr.

Biological evolution and principles of human genetics; evolution of the primates and the fossil record for the evolution of man stressed; relationship between race and culture discussed.

Anth. 233 CULTURAL SYMBOLISM I: LANGUAGE IN CULTURE 3 cr.

Focuses on the social and cultural functions of language; particular emphasis on problems in anthropology with respect to non-Western languages.

Anth 244 BASIC ARCHAEOLOGY 3 cr.

Investigates the nature of archaeological data, goals of archaeology, models for history and prehistory, and significant archaeological contributions to knowledge. Includes a survey of excavation methods.

Anth. 312 WORLD ETHNOGRAPHY 3 cr.

Prerequisite: Anth. 110 or 211.
Study in depth of specific non-literature cultures to explore questions of cultural integration.

Anth. 313 OLD WORLD ARCHAEOLOGY 3 cr.

Prerequisite: Anth. 110 or 244.
Prehistory of Europe and Asia, from Paleolithic through Neolithic developments; emphasis on technology, chronology, ecology, and cultural processes.

Anth. 314 ETHNOLOGY OF NORTH AMERICAN INDIANS 3 cr.

Prerequisite: Anth. 110 or 211.
Survey of the culture history and culture area characteristics of the Indians of North America; detailed study of representative groups, related to historical, functional, and ecological concepts.

Anth. 315 NORTH AMERICAN ARCHAEOLOGY 3 cr.

Prerequisite: Anth. 110 or 244.
Prehistory of North American Indians, emphasizing technology and stylistics, history, and cultural ecology.

Anth. 316 THE ANTHROPOLOGY OF RELIGION 3 cr.

Prerequisite: Anth. 110 or 211.
Deals with the nature, function and universal characteristics of religion in human society by utilizing the cross-culture approach. Theories concerning religious phenomena serve as topics for discussion.

Anth. 317 QUANTITATIVE AND INSTRUMENTAL ARCHAEOLOGY 3 cr.

Prerequisite: Anth. 110 or 244.
Lecture and laboratory course concentrating on the history of museums, natural science and anthropological museum methods and techniques, providing practical experience in exhibit preparation and installation.

Anth. 319 SOCIAL STURCTURE AND FUNCTION 3 cr.

Prerequisite: Anth. 110 or 244.
A survey concerning the mechanisms of integration in social organization and their role in the development of societies; Family, Kinship and Ideological systems are stressed.

Distributive Education, and Marketing. Students are encouraged to select more than one area of concentration, as additional hours beyond the minimum requirements enrich the student's preparation for teaching. Student teaching is carried out under local supervision at the various centers. In addition, coordinators from the University observe and counsel the student teachers.

BUSINESS MANAGEMENT

The training offered by the Business Management Department is intended to provide a broad liberal background in the behavioral sciences; to give a keen perception of the social-economic world in which we live and work; to provide the foundation of general professional education for personally fruitful and socially useful careers in the varied fields of business and other types of institutions; and to furnish the opportunity to obtain the specialized knowledge and skills essential to future occupational growth and advancement for students preparing for responsible technical, supervisory, and executive positions. Students may pursue work according to their particular interests and aptitudes.

DEGREE REQUIREMENTS

All degree candidates in the School of Business must fulfill the University's 52-credit General Education requirement, and candidates for degrees in Education must fulfill the 28-credit requirement in professional Education courses, needed for certification. Specific courses to fulfill the General Education requirement and meet special degree requirements within the School of Business are identified under the Departments involved.

In addition, degree requirements for ALL Business students include a general requirement of 18 credits in Business courses as follows:

General Requirement

Bus 221	Introduction to Accounting	3 cr.
Bus 235	Business Law I	3 cr.
Bus 251	Intermediate Accounting	3 cr.
*Bus 321	Business Communication	3 cr.
Bus 336	Business Law II	3 cr.
Bus 339	Business Data Processing	3 cr.

*May be part of the University's General Education requirement.

COURSE DESCRIPTIONS

The courses listed below (prefix Bus) are available to students in both the Business and Distributive Education Department and the Business Management Department. Students in the School of Business should refer to the specific requirements for their respective degrees (BE — Business Education, DE — Distributive Education, and BM — Business Management), shown by the Department.

Bus 101 BUSINESS ORGANIZATION AND MANAGEMENT 3 cr.

This introductory course is an overview of the principles, practices, and methods common to most business firms in a private enterprise system.

Bus 131 PRINCIPLES OF TYPEWRITING 2 cr.

Emphasis on development of correct techniques in typewriting, introduction to basic styles of business letters, simple tabulations and simple manuscripts; specific standards of speed and accuracy are required. Credit may be given by examination.

Bus 132 INTERMEDIATE TYPEWRITING 2 cr.

Prerequisite: 2.0 QPA in Bus 131 or "credit by examination."
Emphasis on further development of speed, accuracy, and production ability; includes business letters with special features, business reports, business forms, rough drafts, manuscripts, liquid and stencil duplication.

Bus 221 INTRODUCTION TO ACCOUNTING 3 cr.

Introduces the student to the keeping of records for service and professional establishments, as well as mercantile enterprises involving the single proprietor.

Bus 233 MARKETING 3 cr.

Study of business activities necessary to planning, pricing, promoting, and placing of goods and services for use by household consumers and industrial users.

Bus 235 BUSINESS LAW I 3 cr.

Deals with the nature of law and the agencies and procedures for its enforcement, contracts, agency employment, negotiable instruments, property and bailments.

Bus 251 INTERMEDIATE ACCOUNTING 3 cr.

Prerequisite: Bus 221 — with at least a 2.0 QPA.
Special consideration given to accrued and deferred items; the significance and handling of valuation accounts and interpretation of the effect of all types of transactions on the operation of a business.

Bus 261 SHORTHAND THEORY 3 cr.

An introductory course in the basic principles of Gregg Shorthand, Diamond Jubilee.

Bus 262 SHORTHAND DICTATION 3 cr.

Prerequisite: Bus 261.
Major objectives for this course are to review and strengthen the student's knowledge of the principles of Gregg Shorthand, Diamond Jubilee, to build shorthand-writing speed, and to build transcription skill.

Bus 271 ADVANCED TYPEWRITING 2 cr.

Prerequisites: At least a 2.0 QPA in Bus 131 and 132.
Continuation of speed and accuracy development and production ability, advanced work in letter forms, legal documents, statistical reports, tables, and manuscripts. Instruction on VariTyper included.

Bus 321 BUSINESS COMMUNICATIONS 3 cr.

Prerequisite: English 101 and 102.
The major objective of this course is to develop the student's ability to write business communications clearly and effectively.

Bus 332 RETAIL MANAGEMENT 3 cr.

Prerequisite: DE 331 or Bus 233 or Bus 333.
Study of the structure and changing environment of retailing; special emphasis on merchandise management, organization, sales promotions, services and control.

Bus 333 PRINCIPLES OF SELLING 3 cr.

Covers the field of selling, preparing to sell, the selling process and an introduction to sales management. Sales demonstrations incorporating audio-visual aides are a part of the course.

Bus 335 OFFICE MACHINES 2 cr.

Covers the fundamentals of operating office machines — key driven and electronic printing calculators; key punch; dictating and transcribing machines; bookkeeping machines. Includes instruction in records management.

Bus 336 BUSINESS LAW II 3 cr.

Prerequisite: Bus 235.
The basic aim of this course is the same as that stated for Business Law I. Attention is given to kinds of business organizations, sales, insurance, surety and guaranty, leases and mortgages, trust and estates, bankruptcy, business torts and crimes.

Bus 339 BUSINESS DATA PROCESSING 3 cr.

Students are familiarized with the development and use of Business Data Processing Systems. Data processing methods and equipment, computer programming, and the interpretation of business information are covered.

Bus 352 CORPORATE ACCOUNTING 3 cr.

Prerequisite: Bus 251.
A continued study of the financial principles and practices of accounting with emphasis on the characteristics, records, and financial reports of corporations.

Bus 353 COST ACCOUNTING 3 cr.

Prerequisite: 2.0 QPA in Bus 221 and Bus 251.
Basic theory and procedures for determining unit cost of production and cost control involving material, labor, and manufacturing expenses in job-order and process cost systems. The costing of joint and by-products.

Bus 360 ACCOUNTING FOR FOOD SERVICE 3 cr.

In this course the student will gain the knowledge and skills necessary to maintain and interpret the financial records of a food service operation. (Open only to Food and Nutrition majors.)

Bus 363 TRANSCRIPTION 3 cr.

Prerequisite: Bus 262.
Develop additional speed in taking dictation, with emphasis on the development of transcription skill.

Bus 364 SECRETARIAL OFFICE PRACTICE 3 cr.

Prerequisite Bus 363.
An advanced study of theory and practice in activities common to the office — handling the mail, telegraphic services, shipping services, meeting callers, various business reports, and secretarial standards.

Bus 439 BUSINESS INFORMATION SYSTEMS 3 cr.

Orientates the student to the philosophy and concepts of business information systems. The areas of problem definition, information economics, information management, flow charting, truth table testing, and documentation will be included.

Bus 454 FEDERAL TAXES 3 cr.

Prerequisite: Bus 352.
The intent of this course is to acquaint students with the Federal Income Tax Laws as they affect individuals, single proprietorship, and partnerships.

Bus 455 AUDITING 3 cr.

Prerequisite: Bus 353.
Study of auditing theory and the practical application of auditing standards and procedures to the verification of accounts and financial statements; working papers; and audit reports.

BUSINESS AND DISTRIBUTIVE EDUCATION DEPARTMENT

DENNIS D. TIGER, CHAIRMAN; BEAUMONT, BETTA, GHESSIE, HILEMAN, MAHAN, MOREAU, PATTERSON, POLESKY, RISHER, SHROCK, SPENCER, THOMAS, VARNER, WOOMER.

Degrees offered by the Business and Distributive Education Department are the Bachelor of Science in Education with a Business Education major and the Bachelor of Science in Education with a Distributive Education major.

In addition to the 18 credits in Business courses required of all candidates for a degree from the School of Business, a core program of 18 credits is required of all majors in the Business and Distributive Education Department, as follows:

Core Program

Business		
Bus 101	Business Org. and Management	3 cr.
Bus 131	Principles of Typewriting	2 cr.
Bus 132	Intermediate Typewriting	2 cr.
Bus 333	Principles of Selling	3 cr.
Bus 335	Office Machines	2 cr.
Business Education		
*BE 111	Foundations of Mathematics	3 cr.
*BE 212	Business Math II	3 cr.

*May be part of the University's General Education requirement.

B.S. IN EDUCATION (BUSINESS EDUCATION MAJOR)

DENNIS D. TIGER, CHAIRMAN

The curriculum in Business Education is designed to prepare the student for a professional career teaching office occupations. Students may pursue the work of the entire curriculum or they may elect to pursue work according to their aptitudes, as follows:

1. The Complete Program leads to certification in all fields, thus affording certification in all of the high school business subjects. Those who possess aptitudes that indicate success in secretarial, accounting, and data processing work may pursue this complete program if they wish.

A combination program includes any two of the areas of concentration. School administrators believe that a combination program is desirable for breadth of certification when teaching in the public schools of the Commonwealth of Pennsylvania.

2. The Secretarial Field includes all the courses in the curriculum listed under that heading. Elective courses may be chosen from any other Department of the University.

3. The Accounting Field includes all of the courses in the curriculum listed under that heading. Elective courses may be chosen from any other Department of the University.

4. The Data Processing Field includes all of the courses in the curriculum listed under that heading. Elective courses may be chosen from any other Department of the University.

All majors in Business Education must take 2 more credits in Busienss and 6 more credits in Business Education:

Business

Bus 271	Advanced Typewriting	2 cr.

Business Education

*BE 311	Methods of Teaching Business Courses	3 cr.
*BE 312	Eval. Tech. in Business Courses	3 cr.

*These are included in the 28 Professional Education requirements.

Practical Business Experience

Before graduation, each student is encouraged to complete the equivalent of 16 months of secretarial practice, accounting practice, data processing, clerical practice, or a combination of these. This experience should be in the field or fields in which the student is contemplating certification and can be acquired during summer vacations and in offices on the campus during the regular school term.

Specialization in the several areas available to the Business Education student is accomplished by taking the additional courses listed as follows:

Courses Required in the Secretarial Sequence

Bus 261	Shorthand Theory	3 cr.
Bus 262	Shorthand Dictation	3 cr.
Bus 363	Transcription	3 cr.
Bus 364	Secretarial Office Practice	3 cr.
Econ 122	Prin of Economics II	3 cr.

Courses Required in the Accounting Sequence

Bus 352	Corporate Accounting	3 cr.
Bus 353	Cost Accounting	3 cr.
	or	
Bus 454	Federal Taxes	3 cr.
Econ 122	Prin of Economics II	3 cr.

Courses Required in the Data Processing Sequence		
Bus 439	Business Information Systems	3 cr.
Math 101	Foundation of Mathematics (Computer)	3 cr.
Bus 339	Business Data Processing	3 cr.
CSci 300	Assembly Language Programming	3 cr.
Bus 352	Corporate Accounting	3 cr.
Bus 353	Cost Accounting	3 cr.
	or	
Bus 454	Federal Taxes	3 cr.
Special Electives*		
Bus 455	Auditing	3 cr.
BE 342	Consumer Economics	3 cr.

*Certain Business Management courses may be selected as electives.

COURSE DESCRIPTIONS

BE 111 FOUNDATIONS OF MATHEMATICS 3 cr.

Fundamental processes are reviewed, plus fractions, decimals, and precentage. Business topics studied are the 60-day, 6% method of computing interest; compound interest; bank, cash, and trade discounts; and partial payments.

BE 212 BUSINESS MATHEMATICS II 3 cr.

Prerequisite: BE 111.

To apply the principles of business mathematics with speed and accuracy in solving advanced problems encountered by the businessman and the consumer. Provides a background for beginning accounting courses.

BE 311 METHODS OF TEACHING BUSINESS COURSES 3 cr.

Prerequisites: Ed Psy 302 and completion of at least one major area.

Methods of teaching shorthand, typewriting, bookkeeping, office machines, and general business courses are presented. Unit plans, lesson plans, and video-taped microteaching are emphasized.

BE 312 EVALUATIVE TECHNIQUES IN BUSINESS COURSES 3 cr.

Prerequisite: BE 311.

Construction, administration, scoring, treatment and grading of various types of tests; includes analysis of test results, remedial teaching and other evaluation procedures.

BE 342 CONSUMER ECONOMICS 3 cr.

To understand how the American economic system operates; to apply the principles of business procedures to personal and family problems relating to earning an income and to the wise management of money.

BE 433 SUPERVISED WORK EXPERIENCE AND SEMINAR IN OFFICE OCCUPATIONS 6 cr.

Students gain experience in selected office occupations. This cooperative business experience is conducted by competent business and University personnel. There is a weekly evening seminar.

General Electives

BE 371 PERSONAL TYPEWRITING AND DUPLICATING 1 cr.

In this beginning course in typewriting, students learn how to touch type and use the spirit duplicator and mimeograph machines. (Open to all students EXCEPT BE and DE majors and Office Management majors in the Business Management Department.)

B.S. IN EDUCATION (DISTRIBUTIVE EDUCATION MAJOR)

DONALD C. MAHAN, TEACHER-EDUCATOR

The curriculum in this Department is designed to prepare students for a professional career teaching the distributive occupations. Students following this program will be graduated as Teacher-Coordinators of Distributive Education and will be also certified to teach certain courses in Business Education.

Teaching in the field of Distributive Education combines the personal satisfaction of teaching with the enjoyment of public relations work in the distributive area of business – retailing, wholesaling, and service enterprises. The student who likes the prestige of teaching, along with the plus values of working with business leaders and young people, will find this a challenging and rewarding career. Distributive Education presents a promising future for persons in the teaching profession. With the recognition of the importance of distribution to our national economy, this vocational field of teaching is expanding rapidly.

Students enrolled in this field are encouraged to combine this area of concentration with the Accounting field.

Degree requirements include those previously outlined for the School and the Department plus 6 more credits in Business, 15 credits in Distributive Education, and 3 in Economics as follows:

Business

Bus 233	Marketing	3 cr.
Bus 332	Retail Management	3 cr.

Distributive Education

DE 310	Principles of Distributive Ed.	3 cr.
DE 313	Methods of Teaching Distrib. Ed.	3 cr.
DE 331	Modern Merchandising	3 cr.
DE 434	Work Exp. and Sem. in Distrib. Ed.	6 cr.

Economics

Econ 122	Prin. of Economics	3 cr.

COURSE DESCRIPTIONS

Admission to professional courses in Distributive Education is subject to approval by a faculty committee.

DE 310 PRINCIPLES OF DISTRIBUTIVE EDUCATION 3 cr.

To acquaint prospective teacher-coordinators with the objectives of vocational distributive education, including the state plan and curriculum. To understand the problems in organizing, administrating, and supervising a complete cooperative program.

DE 313 METHODS OF TEACHING COURSES IN DISTRIBUTIVE EDUCATION 3 cr.

Prerequisite: DE 310.
To acquaint students with the basic principles of group and individual instruction in the various subject matter areas, as well as methods of presentation. Students prepare unit plans, lesson plans, demonstrations and evaluations.

DE 331 MODERN MERCHANDISING 3 cr.

Techniques for planning and controlling inventory, analyzing sales, working with modern systems for handling cash, uses of color, line and design. Practice in preparing merchandise display units.

DE 434 SUPERVISED WORK EXPERIENCE AND SEMINAR IN DISTRIBUTIVE EDUCATION 6 cr.

Prerequisite: Bus 333.
Students gain experience in selected distributive occupations. This cooperative business experience is conducted by competent business and University personnel. There is a weekly evening seminar.

BUSINESS MANAGEMENT DEPARTMENT

CHARLES L. COOPER, CHAIRMAN; BREYER, BURNER, CAWLEY, FLETCHER, McAFOOSE, McCAFFREY, McCLURE, PILLION, PLIVELIC, REIFEL, ROBBINS, SHILDT, SPENCER, STEVENSON, STROCK.

This Department offers those who seek a career in the world of business or industry an opportunity to pursue their interests in any of seven areas of specialization: Accounting, Systems Analyst, Office Management, Finance, Marketing, Personnel Management, or General Business. The degree offered by the Business Management Department is the Bachelor of Science in Business Management. The curriculum is generally similar for all during the first 2 years. The choice of an area of specialization is necessary prior to the start of the student's junior year.

The Accounting area provides the training necessary for a person to enter the field of public accounting, accounting in business or industry, or governmental accounting.

The Finance area provides specialized training for those desiring positions in banking, brokerage, or insurance.

The Marketing area provides training for those interested in advertising, marketing research, sales management, retailing and the marketing service departments of wholesalers and manufacturers.

The Personnel Management program is designed to prepare students for eventual positions in personnel and related management areas.

The Systems Analyst area provides training in business computer technology and in the designing and implementation of management information systems.

The Office Management area provides training for executive secretarial positions and various related office positions.

The General Business area provides an opportunity for students to pursue training in two or more of the previous areas of specialization, but not to the extent permitted a student concentrating in only one of these areas.

Each area provides for a generous election of a wide variety of business, economics, or business-related courses, designed to enrich the student's understanding of the world of modern business.

The Department requires that two-thirds of a student's electives be taken in Business or business-related courses.

In addition to the 18 credits in Business courses required of all candidates for a degree from the School of Business, a core program of 25-26 credits is required of all Business Management majors, as follows:

Core Program

Business		
Bus 233	Marketing	3 cr.
Business Management		
BM 201	Personnel Management	3 cr.
BM 215	Business Statistics	3 cr.
Other		
*Math 011	Elementary Functions	3 cr.
	and	
*Math 013	Calculus I for the Natural and Social Sciences	4 cr.
	or	
*Math 013-015	Calculus I and II for the Natural and Social Sciences	4 cr. ea.
*Math 362	Probability and Statistics	3 cr.
Econ 121*-122	Principles of Economics I and II	6 cr.

*May be part of the University's General Education requirement.

Courses required for the specific areas of specialization follow.

Accounting Sequence

In addition to the requirements previously outlined, requirements for specialization in Accounting are 12 more credits in Business, 9 more credits in Business Management, and 6 more credits in Economics, as follows:

Business		
Bus 352	Corporate Accounting	3 cr.
Bus 353	Cost Accounting	3 cr.
Bus 454	Federal Taxes	3 cr.
Bus 455	Auditing	3 cr.
Business Management		
BM 241	Finance	3 cr.
BM 451	Advanced Principles of Accounting	3 cr.
BM 456	Advanced Cost Accounting	3 cr.
Economics		
Econ 325	Monetary Economics I	3 cr.
Econ 330	Labor Economics	3 cr.

This program leaves 13-14 credits for electives.

Finance Sequence

In addition to the requirements previously outlined, requirements for specialization in Finance are 6 more credits in Business, 24 more credits in Business Management and 6 more credits in Economics, as follows:

Business		
Bus 352	Corporate Accounting	3 cr.
Bus 454	Federal Taxes	3 cr.
Business Management		
BM 241	Finance	3 cr.
BM 380	Principles of Invest.	3 cr.
BM 381	Insurance I	3 cr.
BM 382	Principles of Real Estate	3 cr.
BM 383	Insurance II	3 cr.
BM 385	Securities & Commodities Markets	3 cr.
BM 481	Investment Analysis	3 cr.
BM 485	Financial Inst. and Markets	3 cr.
Economics		
Econ 325	Monetary Economics I	3 cr.
Econ 330	Labor Economics	3 cr.

This program leaves 4-5 credits for electives.

Marketing Sequence

In addition to the requirements previously outlined, requirements for specialization in Marketing are 6 more credits in Business, 21 more credits in Business Management, and 6 more credits in Economics, as follows:

Business		
Bus 332	Retail Management	3 cr.
Bus 352	Corporate Accounting	3 cr.
Business Management		
BM 241	Finance	3 cr.
BM 331	Consumer Behavior	3 cr.
BM 332	Marketing Management	3 cr.
BM 433	International Marketing	3 cr.
BM 434	Advertising	3 cr.
BM 435	Seminar – Cur. Market Problems	3 cr.
BM 438	Marketing Research	3 cr.
Economics		
Econ 325	Monetary Economics I	3 cr.
Econ 330	Labor Economics	3 cr.

This program leaves 7-8 credits for electives.

Personnel Management Sequence

In addition to the requirements previously outlined, requirements for specialization in Personnel Management are 6 more credits in Business, 9 more credits in Business Management, 6 more credits in Economics, 3 credits in Sociology, and 3 credits in Psychology, as follows:

Business		
Bus 352	Corporate Accounting	3 cr.
Bus 454	Federal Taxes	3 cr.
Business Management		
BM 301	Training Management	3 cr.
BM 401	Case Studies in Personnel Management	3 cr.
BM 480	Practices and Processes of Collective Bargaining	3 cr.
Economics		
Econ 325	Monetary Economics I	3 cr.
Econ 330	Labor Economics	3 cr.
Sociology		
Soc 340	Industrial Sociology	3 cr.
Psychology		
Psy 400	Industrial Psychology	3 cr.

This program leaves 10-11 credits for electives.

Systems Analyst Sequence

In addition to the requirements previously outlined, requirements for specialization as a Systems Analyst are 6 more credits in Business, 24 more credits in Business Management, and 3 credits in Computer Science, as follows:

Business		
Bus 352	Corporate Accounting	3 cr.
Bus 439	Business Information Systems	3 cr.
Business Management		
BM 241	Finance	3 cr.
BM 340	Business Systems Technology	3 cr.
BM 342	Bus. Problems Appl I	3 cr.
BM 441	Bus Prob Program	3 cr.
BM 442	Bus Prob Appl II	3 cr.
BM 443	Bus Systems Analysis I	3 cr.
BM 444	Bus Systems Analysis II	3 cr.
BM 445	Quant Methods — Operat Res	3 cr.

Computer Science

CSci 300	Assembly Language Programming	3 cr.

This program leaves 7-8 credits for electives.

Office Management Specialization

In addition to the requirements previously outlined, requirements for specialization in Office Management are 20 more credits in Business, 3 more credits in Business Management, and 6 more credits in Economics, as follows:

Business

Bus 131	Principles of Typewriting	2 cr.
Bus 132	Intermediate Typewriting	2 cr.
Bus 261	Shorthand Theory	3 cr.
Bus 262	Shorthand Dictation	3 cr.
Bus 271	Advanced Typewriting	2 cr.
Bus 335	Office Machines	2 cr.
Bus 363	Transcription	3 cr.
Bus 364	Secretarial Office Practice	3 cr.

Business Management

BM 470	Office Management	3 cr.

Economics

Econ 325	Monetary Economics I	3 cr.
Econ 330	Labor Economics	3 cr.

This program leaves 13-14 credits free for electives.

General Business Specialization

In addition to the requirements previously outlined, requirements for specialization in General Business are 6 more credits in Business, 3 more credits in Business Management, and 6 more credits in Economics, as follows:

Business

Bus 352	Corporate Accounting	3 cr.
Bus 454	Federal Taxes	3 cr.

Business Management

BM 241	Finance	3 cr.

Economics

Econ 325	Monetary Economics I	3 cr.
Econ 330	Labor Economics	3 cr.

This program leaves 25-26 credits for electives.

COURSE DESCRIPTIONS

BM 111 FOUNDATIONS OF MATH (MANAGEMENT) 3 cr.

Emphasis placed on solving business problems through business mathematics. Personal business and consumer-related areas, such as interest and discount, are included, as well as percentage, markup, taxes, and insurance.

BM 201 PERSONNEL MANAGEMENT 3 cr.

Introduces and stresses basic policies and procedures required in the management of personnel, with emphasis on procuring, developing, maintaining, and utilizing employees for maximum efficiency.

BM 215 BUSINESS STATISTICS 3 cr.

Prerequisites: BM 111, Math 362.
Objective is the application of statistical methods, which are used in guiding business decisions; emphasis is on classical decision theory and Bayesian decision theory.

BM 241 FINANCE 3 cr.

Study of methods of securing and managing funds on short, intermediate, and long-term bases; the financial analysis, planning, and control of a corporation.

BM 301 TRAINING MANAGEMENT 3 cr.

Prerequisite: BM 201.
Principles, problems and procedures in planning, organizing, directing, and controlling training at all echelons of a business enterprise.

BM 331 CONSUMER BEHAVIOR 3 cr.

Prerequisites: Bus 233, Psy 201.
Survey of noteworthy contributions of the behavioral sciences and research of consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.

BM 332 MARKETING MANAGEMENT 3 cr.

Prerequisites: Bus 233, BM 331.
Analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a business from a total marketing program.

BM 340 BUSINESS SYSTEMS TECHNOLOGY 3 cr.

Prerequisites: Bus 339, 439; CSci 300.
Reviews computer technology and its influence on the organization and processing of data files, along with the input, output, processing communications and storage devices.

BM 342 BUSINESS PROBLEM APPLICATION I 3 cr.

Prerequisites: Bus 339, 439, CSci 300.
System design and programming of applications related to different business areas utilizing card, taped, and disk files.

BM 380 PRINCIPLES OF INVESTMENTS 3 cr.

Prerequisite: BM 241.
Analysis of various types of securities and other forms of investment possibilities and a study of sound investment policies from a corporate viewpoint. Factors influencing the general movement of security prices and the return from investments are considered.

BM 381 INSURANCE I 3 cr.

Comprehensive study of that insurance which provides protection against the economic loss caused by termination of earning capacity. Analyzes benefits, underwriting, ratemaking, and legal doctrines.

BM 382 PRINCIPLES OF REAL ESTATE 3 cr.

Study of the regulations, practices, legal aspects and professional ethics of the real estate business, including the area of financing, advertising, property valuation and appraisal and selling.

BM 383 INSURANCE II 3 cr.

Study of the hazards of underlying, the principles involved in, and the protection provided by property and liability insurance, including multiple line and "all risks" insurance, and corporate suretyship.

BM 385 SECURITIES AND COMMODITIES MARKETS 3 cr.

Prerequisite: BM 241.
Study of the structure of security and commodity markets; the nature of speculative transactions and methods of trading; analysis of pricing; and the objectives of security and commodity market regulation.

BM 401 CASE STUDIES IN PERSONNEL MANAGEMENT 3 cr.

Prerequisite: BM 201.
Actual and realistic case studies illustrating the principles, practices, and procedures involved in planning, organizing, and controlling the personal aspect of supervising employees.

BM 433 INTERNATIONAL MARKETING 3 cr.

Prerequisites: Bus 233, BM 331.
International marketing is analyzed, with consideration given to the significance of government regulation; organization structures of export and import enterprises; and credit policies.

BM 434 ADVERTISING 3 cr.

Prerequisite: Bus 233.
An introduction to the principles, practices, and creations of advertising. The use of various media, legal, economic, social and ethical aspects of advertising are also considered.

BM 435 SEMINAR IN CURRENT MARKETING PROBLEMS 3 cr.

Prerequisites: BM 332, 438, 434.
A terminal course designed for majors in Marketing; considers

current literature in the field, case problems pertaining to the total marketing effort, and actual problems of local companies.

BM 438 MARKETING RESEARCH 3 cr.

Prerequisite: Bus 233.
The nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems, studied through the use of case material and outside research.

BM 441 BUSINESS PROBLEM PROGRAMMING 3 cr.

Prerequisites: Bus 339, 340, 439; CSci 300; BM 342.
The study of Business-oriented high-level languages of Cobol, and RPG, and solving problems in accounting, marketing, statistics, and finance.

BM 442 BUSINESS PROBLEM APPLICATION II 3 cr.

Prerequisites: Bus 439; BM 340, 342.
Business-oriented information system involving magnetic tape and indexed sequential disk files; creation, maintenance, and report-writing functions are considered.

BM 443 BUSINESS SYSTEMS ANALYSIS I 3 cr.

Prerequisites; Bus 339, 439, CSci 300; BM 340, 342.
Study of the techniques used in Systems Analysis, involving systems definition, feasibility, quantitative, and evaluative techniques of business.

BM 444 BUSINESS SYSTEMS ANALYSIS II 3 cr.

Prerequisites: BM 441, 442, 443.
Study of business sub-systems, such as production, inventory, and marketing, with the requirement of a documented study of a sub-system of an outside business.

BM 445 QUANTITATIVE METHODS — OPERATING RESEARCH 3 cr.

Prerequisites: BM 441, 442, 443.
Develops the computer programs necessary for business decision-making techniques; intensive analysis of the decision-making process: diagnosing problems; evaluation of alternative solutions, projection of results and the choice of alternatives.

BM 451 ADVANCED PRINCIPLES OF ACCOUNTING 3 cr.

Prerequisite: Bus 352.
Study of accounting problems of a specialized nature, including the application of funds statement, consignments, installment sales, receivership accounts, agency and branch accounting and corporate combinations.

BM 456 ADVANCED COST ACCOUNTING 3 cr.

Prerequisite: Bus 353.
Study of the theory, preparation, and use of budgets, the analysis of cost variances, direct costing, and extensive analysis of various cost-control and profit-planning programs.

BM 470 OFFICE MANAGEMENT 3 cr.

Prerequisite: Seniors only.

Study of the principles of office management and their application in controlling office costs; work flow, office equipment selection; selection, training and supervision of office employees; report writing.

BM 480 THE PRACTICES AND PROCESSES OF COLLECTIVE BARGAINING 3 cr.

The role, function, and authority of negotiation committees, techniques of negotiation, the negotiations agreement, the mediation process and the arbitration process will be analyzed through mainly a case study approach.

BM 481 INVESTMENT ANALYSIS 3 cr.

Prerequisites: Bus 352, BM 241, 380.

Integrates the work of the various courses in the finance areas and familiarizes the student with the tools and techniques of research in the different areas of investments.

BM 485 FINANCIAL INSTITUTIONS AND MARKETS 3 cr.

Prerequisites: Econ 325, BM 380.

Review of entire structure of financial institutions, money and capital markets, of which the business enterprise is both a supply and demand factor, and structure and dynamics of interest-rate movements.

BM 490 DECISION MAKING IN BUSINESS 3 cr.

Prerequisite: Seniors only.

A case approach to the analytical techniques and concepts necessary in making business decisions concerning marketing, costs, pricing, profits, competition, production, and capital management.

Business Electives

66 2/3rds. per cent of your un-designated electives must be from the following courses:

BU 101	BUSINESS ORGANIZATION AND MANAGEMENT (Restricted to Freshmen and Sophomores)	3 cr.
PC 400	INDUSTRIAL PSYCHOLOGY	3 cr.
SO 340	INDUSTRIAL SOCIOLOGY	3 cr.
	Any 3 credit BU or BM course not requiring a prerequisite or for which you have had the prerequisite.	3 cr. each
	Any non-required Economics course for which you have fulfilled the prerequisite requirements.	3 cr. each

Non-Business Electives:

	Any course listed above in the Social Science and Humanities elective groups.	3 cr. each
	Other non-business electives are available with the approval of the Dean, School of Business or the department chairman.	

NORMAL SCHOOL

THE SCHOOL OF CONTINUING AND NON-RESIDENT EDUCATION AND BRANCH CAMPUSES

The University operates Branch Campuses at Punxsutawney and Kittanning, Pennsylvania.

As a special phase of Continuing Education, the School runs a fall and spring series in the adult education field entitled the COMMUNITY-UNIVERSITY STUDIES SERIES. These non-credit courses are established to fill demands and needs of adults in the area served by the University. The Director of Community-University Studies should be contacted regarding this program.

BRANCH CAMPUSES OF INDIANA UNIVERSITY OF PENNSYLVANIA

ROBERT H. DOERR, DIRECTOR, ARMSTRONG BRANCH CAMPUS; ROBERT E. DAIN, DIRECTOR, PUNXSUTAWNEY BRANCH CAMPUS

Indiana University of Pennsylvania has two Branch Campuses, one in the Punxsutawney community, 28 miles north of the Indiana campus, and one in the Kittanning community, 28 miles west of the main campus.

The first Branch Campus was established in September, 1962, in Punxsutawney. The following year the Armstrong County Branch Campus in Kittanning was opened. Approximately 300 students are enrolled at the Punxsutawney Campus and 550 students at Armstrong County Campus in Kittanning.

Both campuses have University faculty members who teach full time at the Branches. To meet additional curriculum needs, other faculty from the Indiana Campus travel to the Branch Campuses.

The Branches provide one or two full years of college work. The Directors of the Branch Campuses, along with the faculty, advise students concerning their instructional programs and concerning transfer to the Indiana Campus.

Control of the Branch Campuses is directly vested with the Indiana University of Pennsylvania Administration and Board of Trustees. Advisory Boards from the respective areas serve established local needs.

ACCREDITATION

Both Branch Campuses carry full accreditation as integral parts of the undergraduate programs of Indiana University of Pennsylvania. This means that courses offered at the Branch Campuses are of the same quality as those offered on the Indiana Campus.

LIBRARY

Each Branch Campus has its own library, which is staffed by a professional librarian. The Branch Campus libraries are especially practical since the volumes are geared for the specific curricula offered at each Branch. Each Branch Campus has more than 13,000 volumes plus numerous periodicals. In addition, the students may draw upon more than 450,000 volumes available at the Indiana Campus through the inter-library loan system.

HOUSING

Both Branch Campuses have residence halls for students living beyond commuting distance of the campus. The Punxsutawney Campus has a women's and a men's residence hall, Fry Hall I and Fry Hall II. The Armstrong County Campus has two women's residence halls, Boyer Hall and Trust Hall. The men at the Armstrong County Campus are housed in private homes adjacent to the campus. Each of the dormitories has laundry facilities, lounges, and recreational areas for the students. Dining room facilities are available at each of the campuses, and each has contract boarding.

ACTIVITIES

Both Branch Campuses have very active Student Government Associations, which assume the leadership in developing an activity program in line with the interests of the student body. Many of the students at the Branch Campuses are active in Student Government committees, Men's and Women's Judicial Boards, Big Brother-Big Sister

Organization, Newman Club, Christian Fellowship Club, Student PSEA, Psychology Club, Drama Club, student tournaments, intramural contests, and campus newspaper. Weekend dances and formal social events are held at the Branch Campuses under the sponsorship of the Student Government Association. In addition, students may attend any of the sports events, artist-lecture series, and cultural and other social events on the Indiana Campus. Bus transportation is available when a sufficient number of students wish to attend.

ADMISSION

Any prospective student who wishes to attend either of the Branch Campuses instead of the Indiana Campus may apply for admission by requesting an application from the Admissions Office, Indiana University of Pennsylvania, or from the Director of either Branch Campus. The same standards and requirements used for admission at the main campus are applied at both University Branch Campuses.

More detailed information on the programs at Indiana University of Pennsylvania Branch Campuses may be obtained by requesting a Branch Campus Bulletin from the Director, Punxsutawney Campus, Indiana University of Pennsylvania, Punxsutawney, Pennsylvania 15767; or the Director, Armstrong County Campus, Indiana University of Pennsylvania, Kittanning, Pennsylvania 16201. This publication explains the steps necessary for admission, outlines programs of study, and gives other details of the two-year University Programs.

UNIVERSITY EXTENSION COURSES

Indiana University of Pennsylvania is a member of the National University Extension Association. Extension courses in Criminology are offered at a number of locations in the surrounding area. For information regarding location, classes to be offered, costs, and application blanks, contact the Director, Criminology Extension Classes, Indiana University of Pennsylvania, 357-2720. The University cooperates with the Law Enforcement Education Program. Any officer of any publicly funded law enforcement agency may be eligible to receive a grant to be used for tuition and books. The grant will be based upon need. Grant recipients will be reimbursed. Grant applications can be obtained from the Department of Criminology.

THE SCHOOL OF EDUCATION

GEORGE A.W. STOUFFER, JR., DEAN
WILLIAM E. SALESSES, ASSOCIATE DEAN

The departments of the School of Education offer programs leading to the degree of Bachelor of Science in Education, the degree of Master of Education, and the doctoral program leading to the degree of Doctor of Education in Elementary Education. Appropriately, all programs completed in the School of Education lead to certification for public school teaching or supervision in the Commonwealth of Pennsylvania.

SUMMARY OF PROGRAMS OFFERED

Elementary Education	Bachelor of Science in Education Master of Education Doctor of Education
Secondary Education	Bachelor of Science in Education
*English	*Master of Education
*Biology	
*Chemistry	
*Earth and Space Science	
General Science	
*Mathematics	
*Physics	
*Physics-Mathematics	
*Comprehensive Social Studies	
French	
German	
Russian	
*Spanish	
Latin	
Counselor Education	Master of Education (for details, see Graduate School Bulletin)

Dental Hygiene	Bachelor of Science in Education
Public School Nursing	Bachelor of Science in Education
Reading Specialist	Master of Education (for details, see Graduate School Bulletin)
Special Education	
Education for Mentally Retarded	Bachelor of Science Master of Education
Rehabilitation Education	Bachelor of Science in Education
Speech Pathology and Audiology	Bachelor of Science in Education Master of Education
Certification Areas	
Undergraduate	
Education for Safe Living – Driver Education	Certificate (for details, see School of Health Services)
Graduate	
Instructional Media Specialist	Certificate (for details, see Graduate School Bulletin)
School Psychologist	Certificate

DEGREE REQUIREMENTS

All degree candidates in the School of Education (except for three special programs) must complete satisfactorily a minimum of 124 credits in three categories: General Education, a specialized major field, and professional education:

General Education – 52 to 55 credits, described under requirements for Graduation.

Specialized major field – requirements listed under Department offerings.

Professional Education – 27 credits, as follows:

Ed Psy	302	Educational Psychology	3 cr.
Ed Psy	305	Evaluation Methods	2 cr.
FdEd	302	History and Philosophy of American Education	3 cr.
L Res	301	Audio-Visual Education	2 cr.
		Methods Course – (Teaching Of _____, see under major department offerings)	3 cr.
		One semester student teaching, including professional Practicum and School Law	14 cr.

The three special programs are those leading to the Bachelor of Science in Education in Dental Hygiene, in

Public School Nursing, and in Rehabilitation Education. For each program, the degree requirements are listed hereafter.

SOPHOMORE SCREENING FOR JUNIOR STANDING

School of Education majors are screened at the close of the sophomore year for Junior Standing approval. The student must have earned a minimum of 57 semester hours, achieved a 2.0 cumulative quality point average, successfully completed English I and English II and received speech clearance and department approval.

THE UNIVERSITY SCHOOL

The University School provides for a program of instruction from kindergarten through sixth grade, thus affording opportunities for professional laboratory experiences and research activities. Professional laboratory experiences are planned and scheduled with the Director of Professional Laboratory Experiences. Research activities are scheduled with the Director of the University School.

THE UNIVERSITY CLINICS

Three clinics under the supervision of the School of Education offer diagnostic testing and remedial service and instruction in the following areas:

Psychological Clinic – diagnosis of academic and behavior problems and personal, vocational, and educational counseling.

Reading Clinic – diagnosis and remedial instruction for reading and spelling disabilities and instruction for the improvement of present skills.

Speech and Hearing Clinic – diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy.

Regularly enrolled students at the University may avail themselves of these services without charge.

In addition, a Child Study Center provides psychological testing for any pre-school and school-aged child within the area served by the University.

COMMONWEALTH REQUIREMENTS FOR TEACHER AND SUPERVISORY CERTIFICATION

Certification standards for Commonwealth public school teachers and supervisors are established by the Department of Education and the State Council on Education. The Chairman of the Department in which the student is majoring must verify to the office of the School of Education that all qualifications are met. The Dean of the School is authorized to determine final approval for certification.

Applicants for certification are required by State Law to be of good mental and physical health; not in the habit of using either narcotic drugs in any form or intoxicating beverages to excess; and be a citizen of the United States.

The Instructional I certificate is issued to the beginning teacher upon graduation from the School of Education. With additional post-baccalaureate work and successful teaching experience, students may acquire the Instructional II and Instructional III certificates, leading to permanent certification to teach in the Commonwealth of Pennsylvania. Graduates of approved programs in non-teaching areas, such as Dental Hygiene and Public School Nursing, are issued an Educational Specialist I certificate.

GRADUATE PROGRAMS

Information descriptive of M.Ed., Ed.D. and Teaching Internship programs may be found in the current issue of the Graduate School Bulletin.

DENTAL HYGIENE

On November 17, 1950, The Board of Presidents of the State Colleges approved a curriculum for dental hygienists leading to the degree of Bachelor of Science in Education, upon fulfillment of the following:

(1.) The satisfactory completion of an accredited 2-year curriculum for the preparation of dental hygienists, approved by the State Dental Council and Examining Board.

(2.) Licensing of the student by the proper state authorities.

(3.) In addition, the satisfactory completion of 64 credits of professional and general education courses.

General Education		34 credits
Eng 101 and 102	English I and II	7 cr.
Eng 201	English III	3 cr.
Art 101	Introduction to Art	3 cr.
	or	
Mus 101	Introduction to Music	
Ge 251	Geography of the United States and Canada	3 cr.
	or	
Ge 252	Geography of Pennsylvania	
Social Studies — 18 credits, selected from the following:		
Hist 101 and 102	History of Civilization I and II	6 cr.
Hist 104	History of U. S. and Pa. II	3 cr.
PolS 111	American Politics	3 cr.
Econ 121	Principles of Economics I	3 cr.
Soc 151	Principles of Sociology	3 cr.
Education		14 credits
FdEd 302	Hist and Phil of American Education	3 cr.
Psy 201	General Psychology	3 cr.
EdPsy 302	Educational Psychology	3 cr.
Psy 300	The Psychology of Adjustment	3 cr.
LRes 301	Audio-Visual Education	2 cr.
Electives		14 cr.
Total		64 cr.

In each category above, credit may be given for equivalent courses in the 2-year dental hygiene curriculum. In such cases, students may increase their electives by the number of semester hours so credited.

Electives may be chosen with the approval of the Dean from any field or curriculum offered at the college in which the student is enrolled.

Dental hygienists who have had less than 2 years of special training on the basis of which they have been licensed by the State Dental Council and Examining Board will pursue additional courses to fulfill the requirements for the degree.

EDUCATIONAL PSYCHOLOGY DEPARTMENT

ANTHONY A. ANGELONI, CHAIRMAN; WM. BAHN, CUTLER, DeFABO, HAYS, I. HELMRICH, LEVENTRY, MEADOWCROFT, QUIRK, SHANK, YANUZZI.

COURSE DESCRIPTIONS

Professional Education Courses

EdPsy 302 EDUCATIONAL PSYCHOLOGY 3 cr.

Prerequisites: Psy 201, Education Major.
(Required of all Education majors — It is recommended that this course be taken immediately prior to the student teaching experience.)
A course designed to promote a better understanding of the principles of psychology that govern human behavior, with particular emphasis on their relation to the learner, the learning process, and the learning situation in an educational environment.

EdPsy 305 EVALUATION METHODS 2 cr.
or
EdPsy 377 EDUCATIONAL TESTS AND MEASUREMENTS 3 cr.

Prerequisites: Psy 201, Education Major.
(It is recommended that this course be taken immediately prior to the student teaching experience.)
The design and scope of this course is to acquaint the student with the major methods and techniques of evaluation that are used to assess and report the growth, development, and academic achievement of individuals in an educational environment.
EdPsy 377 satisfies the requirements of EdPsy 305 and expands the content to include interpretation of standardized test information and basic research techniques.

General Electives Or For Permanent Certification

These courses satisfy post-graduate certification requirements and serve as electives for undergraduate students in approved teacher education programs.

EdPsy 371 GROUP BEHAVIOR IN THE CLASSROOM 3 cr.

Prerequisites: EdPsy 302, Education Major.
A systematic study of the use of group interaction in the classroom to facilitate deeper self-understanding and self-acceptance and an analysis of group formation and process.

EdPsy 372 PSYCHOLOGY OF CHILDHOOD EDUCATION 3 cr.

Prerequisites: EdPsy 302, Education Major.
Emphasizes the relationship which physical, social, emotional, and intellectual development have on the theory and practice of childhood education

EdPsy 373 PSYCHOLOGY OF ADOLESCENT EDUCATION 3 cr.

Prerequisites: EdPsy 302, Education Major.
The study of the significant characteristics, behavior, and educational and social problems of adolescents.

EdPsy 376 BEHAVIOR PROBLEMS 3 cr.

Prerequisites: EdPsy 302, Education Major.
Examination of the emotional and social aspects of problem behavior encountered in classroom situations and potential remedial techniques.

EdPsy 378 LEARNING 3 cr.

Prerequisites: EdPsy 302, Education Major.
This course explores learning theories and educational application in the classroom.

EdPsy 380 MENTAL HEALTH IN THE CLASSROOM 3 cr.

Prerequisites: EdPsy 302, Education Major.
Designed to create an awareness of the science of mental health and its relationship to the typical student in classroom situations.

EdPsy 383 EDUCATION OF THE DISADVANTAGED CHILD 3 cr.

Prerequisites: EdPsy 302, Education Major.
Acquisition of necessary understandings of the physiological, psychological, and social implications relevant to working with and teaching the disadvantaged child.

EdPsy 384 TUTORIAL EXPERIENCE IN THE PUBLIC SCHOOLS 3 cr.

Prerequisites: EdPsy 302, Education Majors.
Provides for the student tutorial experience in the public schools with professional supervision.

EdPsy 450 INDEPENDENT STUDY IN EDUCATIONAL PSYCHOLOGY 3 cr.

Prerequisites: EdPsy 302, Education Major.
Provides an opportunity for students to investigate in depth an area of Educational Psychology under professional supervision.

ELEMENTARY EDUCATION DEPARTMENT

ROBERT L. KING, CHAIRMAN; BAKER, BARTHA, A. DAVIS, B. DAVIS, DORSEY, GLOTT, KAZAMEK, KOHLHEPP, KUHNS, LINN, LOTT, McFEELY, MILLWARD, MOTT, REILLY, RIZZO, ZEPP, STUART.

Requirements for a degree in Elementary Education, in addition to the University's General Education requirement and 24 credits in Professional Education, are 27 credits in Elementary Education and a concentration of at least 18 credits in one of the following academic areas: early childhood education, English, French, geography, German, history, mathematics, science, social studies, or Spanish.

COURSE DESCRIPTIONS

Required Courses In Elementary Education

El 211 MUSIC FOR THE ELEMENTARY GRADES 2 cr.

Geared for elementary education students. Includes basic ideas for understanding, development, and confidence for future classroom teachers and their pupils in the areas of music education.

El 213 ART FOR THE ELEMENTARY GRADES 2 cr.

The creative use of art materials and an understanding of the development of the capacities of children through art.

El 215 CHILD DEVELOPMENT 3 cr.

A survey of human development, from conception to adolescence, in terms of basic scientific data. Development, growth, and behavior are studied and their implications for home, school, and community are considered.

El 221 CHILDREN'S LITERATURE 3 cr.

Acquisition of a wide acquaintance with children's literature, old and new. Poetry selections, annotated stories, and bibliographies will be assembled. Ways and means to develop, stimulate, and guide children's reading of literature are presented. Principles and techniques of successful story-telling are studied and practiced.

El 222 TEACHING OF READING 3 cr.

A systematic coverage of the teaching of reading, including methods, techniques and materials, from first through sixth grades.

El 312 TEACHING OF ELEMENTARY SCIENCE 3 cr.

Emphasis placed upon science as it relates to the child and the curriculum, planning for teaching science, and recent innovations in science teaching. Course offered on the block only.

El 313 TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL 3 cr.

Prerequisites: Math 160 and Math 250.
Recent developments in the curriculum and methods of instruction of contemporary elementary school mathematics programs. Students will become acquainted with books, materials and other

resources helpful to prospective teachers. Includes observations of master teachers.

El 314 TEACHING OF HEALTH AND PHYSICAL EDUCATION 2 cr.

Games, stunts, rhythms, relays, tumbling, dances, and skills suitable for the elementary school child. The teaching of health in the elementary school is emphasized, including methods, materials and lesson planning.

El 411 TEACHING OF SOCIAL STUDIES 3 cr.

An overview of social studies in the elementary school. Includes the study of objectives, trends, areas of content, patterns and principles of organization and techniques of teaching. A variety of learning experiences and materials will be used and evaluated.

El 413 TEACHING LANGUAGE ARTS 3 cr.

Techniques for teaching, oral and written communication, spelling, handwriting, vocabulary development, listening, and linguistics for Elementary Education students. Evaluates recent trends and research.

Ed 423 PROFESSIONAL PRACTICUM, INCLUDING SCHOOL LAW 2 cr.

A series of conferences and related activities to prepare students for actual teaching experiences. Parallels the student teaching experience in the junior and senior years.

Elective Courses In Elementary Education

El 212 TEACHING OF MUSIC IN THE ELEMENTARY GRADES 3 cr.

Prerequisite: El 211.
A continuation of skills and understandings as developed in El 211, with emphasis on methods and materials for the upper grades. Additional opportunities for growth in music reading and part singing are provided. Correlation of music with other areas.

El 214 TEACHING ART IN THE ELEMENTARY GRADES 3 cr.

Prerequisite: El 213.
In-depth experiences in two- or three-dimensional materials relative to art and credit for the elementary school child.

El 330 PROBLEMS IN ELEMENTARY EDUCATION 3 cr.

Prerequisite: Ed 302.
For in-service teachers and those working toward permanent certification. Formulation of solutions to problems of organization and instruction in the elementary school; in-depth study of teacher-pupil-parent interrelationships.

El 351 CREATIVE ACTIVITIES IN THE ELEMENTARY SCHOOL 3 cr.

Provides the student with a wide range of creative experiences in the fields of art, crafts, music, rhythmics, dramatics and games in the elementary school. Stress is placed upon the need to help

children in developing their capacities for creative expression in these areas.

El 352 DIAGNOSTIC AND REMEDIAL READING 3 cr.

Causes of reading disability; methods of diagnosis; procedures and materials for remedial work, group and individual.

El 353 PRE-SCHOOL EDUCATION 3 cr.

Principles and practices of guiding the learning experiences of the kindergarten student. Special attention will be given to observations, the kindergarten program and its curriculum, materials, and methods of instruction.

El 355 GUIDANCE IN THE ELEMENTARY SCHOOLS 3 cr.

Study and discussion center about the child himself — his characteristics, needs, problems, materials, and relationship with others — and around the techniques and procedures for identifying, studying, and giving help to children.

El 451 TEACHING OF READING IN THE PRIMARY GRADES 3 cr.

The teaching of developmental reading, consistent with child growth, in the primary grades.
Methods and techniques for readiness, word perception, comprehension, work-study skills, independent reading in both group and individualized approaches will be studied.

El 452 SOCIAL STUDIES IN THE PRIMARY GRADES 3 cr.

Prerequisite: El 411.
An examination of content, objectives and resource materials for social studies in kindergarten through third grade. Research problems will be examined and representative units developed.

El 461 ORGANIZATION OF THE ELEMENTARY SCHOOL AND ITS CURRICULUM 3 cr.

A study of the organization of the elementary school from the standpoint of curriculum design and development. The role of the teacher as it relates to the evaluation, improvement, and development of the elementary school curriculum. Designed for those who have completed student teaching or are postgraduates.

El 462 INNOVATIONS IN ELEMENTARY EDUCATION 3 cr.

A study of innovations which influence and direct the educational objectives of the modern elementary school and its organization. Educational innovations dealing with curriculum, school organization, and materials of instruction. Designed for those who have completed student teaching or are postgraduates.

Graduate Programs

Programs leading to the M.Ed. and Ed.D. degrees may be found in the current issue of the Graduate School Bulletin. For a limited number of Elementary Education graduates, an internship program leading to the Master of Education degree is offered.

FOUNDATIONS OF EDUCATION DEPARTMENT

DON-CHEAN CHU, CHAIRMAN; MERRYMAN, MILLER, PENTA, ROTIGEL, THIBADEAU, YOUCIS

COURSE DESCRIPTIONS

Professional Education Courses

FdEd 302 HISTORY AND PHILOSOPHY OF AMERICAN EDUCATION 3 cr.

Promotes a clearer understanding of the modern educational system through a study of historical changes in instructional processes and ideas. Emphasis is on the study of educational beliefs and points of view, the fostering of critical thinking concerning the role of the school in our social structure, the meaning of democracy, the teacher and his profession, and the methods and objectives of the school. (Required of all students in Education.)

Ed 422 SCHOOL LAW 2 cr.

Provides an interpretation of school law as it pertains to the needs of the teacher.

General Electives (Open to Juniors and Seniors)

FdEd 454 PUBLIC SCHOOL ADMINISTRATION 3 cr.

Designed to acquaint the teacher with the administration and organization of the American public school. Consideration is given to the cultural role of the schools, to decision-making in the operation of the schools. Functions and methods of all professional personnel in the operation and improvement of the schools will also be considered.

FdEd 455 COMPARATIVE EDUCATION 3 cr.

A comparative analysis of educational features of some Western European, "underdeveloped" and Communist nations. Development of insights into American educational ideas and practices.

FdEd 456 ISSUES AND TRENDS IN EDUCATION 3 cr.

An examination of important current issues in American education. A critical analysis of trends in educational innovation.

FdEd 457 SECONDARY SCHOOL CURRICULUM 3 cr.

An examination of the social diagnosis for curriculum development, curriculum principles and procedures, patterns of organization, and curriculum issues.

Ed 599 INTERNATIONAL EDUCATION STUDIES PROGRAM 3 cr.

A study of various peoples through their cultural settings and educational systems. On-site visitation to selected schools and

other social agencies and institutions, seminars with school officials, and directed readings. Under-graduate or graduate credit.

Sequence In Urban Education

FdEd 458 ORIENTATION TO TEACHING IN URBAN CENTERS 3 cr.

Designed to give students an understanding of children and youth in urban centers, where specialized knowledge of learning and behavior problems is required. Instructional personnel consists of experienced teachers at the elementary and secondary levels who are actively engaged in urban education. Emphasis is on developing an understanding of the special needs of the disadvantaged child and how the origin of attitudes and values affects the relationship which exists between students and teachers. Special attention will also be given to the practical application of theoretical information to the problems of urban education. Field trips will be an essential aspect of the course.

FdEd 440 FIELD EXPERIENCES IN URBAN CENTERS 6 cr.

Provides a specialized experience for students desiring to teach in inner-city schools. Participants should have completed student teaching requirements at the undergraduate level. Aspects of urban education to be emphasized include the physical characteristics of the community, the background and aspirations of the children and youth and specialized teacher competencies; classroom management, planning, instructional materials, teaching strategies. and evaluations. Students are encouraged to take FdEd 458, Orientation to Teaching in Urban Centers, as a prerequisite. Records of comprehensive experiences in urban areas will be taken into consideration in making student teaching assignments. Schools selected for the student teaching experience are located in Pittsburgh.

FdEd 482 INTERPRETING URBAN FIELD EXPERIENCES 3 cr.

Evaluation of learning and behavior problems encountered during the student teaching experience in urban schools. A flexible approach will be stressed to encourage a wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems will be provided by specialists from Psychology, Sociology and Education. These specialists will function as resource personnel, providing direction which will enable students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information.

Graudate courses offered by this Department include Historical, Philosophical, Social and Comparative Foundations of Education. For specific information concerning these courses, see the current edition of the Graduate School Bulletin.

DEPARTMENT OF LEARNING RESOURCES AND MASS MEDIA

DANIEL V. MATTOX, JR., CHAIRMAN; BERGMAN, JULIETTE, KLINGINSMITH, LAVENBURG, MacISAAC, McCAVITT, McCULLOCH, MURRAY, SARGENT.

COURSE DESCRIPTIONS

LRes 301 AUDIO VISUAL EDUCATION 2 cr.

(Professional course required of all students in Education)
Prerequisite: Psy 201.
Pre-service teachers gain competencies in selecting, using and evaluating audio-visual machines and materials. Performance-based activities in instructional design, materials production, machines operation and related learning resources activities relevant to prospective teaching experiences are stressed.

LRes 371 PHOTOGRAPHY IN EDUCATION 3 cr.

Provides an introduction to photography and emphasizes the potential value of teacher-made photographic materials in teaching. Both the technical and artistic aspects of photography will be considered. Student must provide his own 35 mm camera and an exposure meter. See instructor.

LRes 372 MOTION PICTURE PRODUCTION IN EDUCATION 3 cr.

Emphasizes possibilities for effective use of teacher-made films in the classroom. No prerequisite. Student must provide his own camera and an exposure meter. See instructor.

LRes 373 INTRODUCTION TO RADIO BROADCASTING 3 cr.

Introduction to the organization and operation of a radio station. Technical aspects of radio and programming techniques. Examination of the station's relationship with educational, industrial, and other social institutions.

LRes 471 ADVANCED PHOTOGRAPHY IN EDUCATION 3 cr.

Prerequisite: A basic course in photography or practical experience and permission of instructor.
Provides in-depth experiences in the technical and artistic aspects of photography. Students may elect to develop skills in such specialized areas as high-contrast photography, micro-photography, slide duplication and binding, and advanced enlarging techniques.
Students must provide their own 35 mm camera and an exposure meter. See instructor.

LRes 481 TELEVISION PRODUCTION 3 cr.

Develops basic skills in television production and direction. Consideration of operating problems of a television studio, as well as functions, limitations, and capabilities of television equipment and facilities. Stress will be placed on the educational application of television production.

LRes 482 PREPARATION OF INSTRUCTIONAL MATERIALS 3 cr.

Provides experiences in planning and preparing commonly used materials for classroom and TV use: graphic materials, including layouts and lettering; mounting techniques; copying techniques, such as Thermofax, Polaroid, photography, and Xerography; laminating and color lifting.

PUBLIC SCHOOL NURSING

On January 19, 1951, The Board of Presidents of the State Colleges approved a curriculum for public school nurses leading to the degree of Bachelor of Science in Education, upon fulfillment of the following:

(1.) Satisfactory completion of a 3-year curriculum in an approved school of nursing and registration by the State Board of Examiners for the Registration of Nurses of Pennsylvania.

(2.) Satisfactory completion of 60 credits of additional preparation, distributed as follows:

Courses Related to Public School Nursing		15 credits
PSN 301	Public School Nursing	2 cr.
PSN 302	Public School Organization	2 cr.
PSN 401	Public Health Nursing	6 cr.
PSN 402	Nutrition and Community Health	2 cr.
PSN 403	Family Case Work	3 cr.
General Education		18 credits
Eng 102	English II	3 cr.
Eng 201	English III	3 cr.
Hist 101 or 102	History of Civilization I or II	3 cr.
Hist 104	History of the U.S. and Pa. II	3 cr.
PolS 111	American Politics	3 cr.
Soc 151	Principles of Sociology	3 cr.
Education		14 credits
FdEd 302	History and Phil of American Education	3 cr.
EdPsy 302	Educational Psychology	3 cr.
Psy 300	Psychology of Adjustment	3 cr.
LRes 301	Audio-Visual Education	2 cr.
SpH 354	Audiometry for Public School Nurses	3 cr.
Electives		13 credits

Nurses with less than 3 years' preparation for registration must pursue additional courses to meet the requirements for the degree.

COURSE DESCRIPTIONS

PSN 301 PUBLIC SCHOOL NURSING 2 cr.

A study of the role of the nurse in the public schools. This course offers information on the organization, development, implementation, and evaluation of school health services. Students are given the opportunity for practical experience in performing school nursing procedures and functions. Programs, policies, and procedures presented in this course are in conformity with the Pennsylvania School Health Law, Regulations of the State Departments of Health and Education, and standards adopted by national health and education authorities.

PSN 302 PUBLIC SCHOOL ORGANIZATION 3 cr.

Designed to acquaint the student with the administration and organization of the American public school. Consideration is given to the cultural role of the schools, to decision-making in the operation of the schools. Functions and methods of all professional personnel in the operation and improvement of the schools are considered.

PSN 401 PUBLIC HEALTH NURSING 6 cr.

This course is designed to provide the student an understanding of the principles of public health nursing and the basic public health services which come under official jurisdiction. Traditional emerging health programs at the national, state, and local level are explored. Emphasis is placed on the utilization of public health services in school setting.

PSN 402 NUTRITION AND COMMUNITY HEALTH 2 cr.

A study is made of nutritional problems of family members, from the infant to the aged people of the community. Emphasis is placed on reorganizing good nutritional status and on ways of guiding families toward better nutrition. School health lunch is also emphasized.

PSN 403 FAMILY CASE WORK 3 cr.

This course proposes that, in order to understand a child and guide his experiences in school more intelligently, educators must have an acquaintance with his family and home situation. This involves recognizing parents' attitudes toward the child, the child's feelings toward his parents, the child's role in the family, and special factors within family life that affect his behavior and mental health. Guided experiences in working with families and preparing case studies are provided in this course.

SPECIAL EDUCATION AND CLINICAL SERVICES

MORTON MORRIS, CHAIRMAN; M. BAHN, BORMANN, BRUNGARD, CHAPMAN, FELIX, FIDDLER, FLAMM, GEISEL, MEASE, SHANE, POUNDS, SCANLON, VICKERS.

This Department offers the degree of Bachelor of Science in Education in any one of three options for students whose major interest is work with exceptional children and adults. Each of the three options follows a prescribed sequence of courses. Students may elect to major in any one of the following fields of exceptionality:

(A) Education for the Mentally Retarded
(B) Speech Pathology and Audiology
(C) Rehabilitation Education

Completion of either of the first two major areas leads to certification in the Pennsylvania Public Schools. All three major areas prepare students seeking career opportunities with state and federal rehabilitation agencies and with health and welfare agencies in clinical and institutional settings.

Students in other departments not intending to major in any of the options but who wish to improve their understanding of exceptionality may elect any of the following introductory courses:

COURSE DESCRIPTIONS

Introductory Courses (Open to All Students)

SpE 220 INTRODUCTION TO EXCEPTIONAL CHILDREN 3 cr.

Surveys characteristics, needs, problems, and behavior patterns of children who deviate sufficiently from the "normal" to be considered exceptional. Consideration will be given to those who fall intellectually both above and below the average; to those who are handicapped visually, acoustically, behaviorally, orthopedically, neurologically or in respect to speech patterns.

SpE 215 CHILD DEVELOPMENT 3 cr.

Childhood foundations of human growth and development. Research from various disciplines is studied in terms of understanding physical, mental, social and emotional factors and how these interrelate throughout childhood development.

SpH 254 SPEECH DEVELOPMENT AND IMPROVEMENT 3 cr.

The study of those aspects of speech and hearing problems pertaining to the classroom situation. Types of speech and hearing disorders, conducting speech improvement lessons, classroom aids for the speech and hearing defective child, and school and community resources for these children are emphasized.

SpE 362 DEVELOPMENTAL READING 3 cr.

Objectives, background knowledge and understandings of the developmental reading process, an over-view of the elementary program, the pre-adolescent and the adolescent and their needs in reading, finding and providing for instructional needs, and special problems.

(A.) Education for the Mentally Retarded

Students may become certified as teachers of the mentally retarded by pursuing a coordinated sequence of prescribed courses and by fulfilling requirements for student teaching with the mentally retarded. Student teaching experiences are provided at elementary and secondary levels and with educable or trainable mentally retarded, according to individual preferences. The program aslo provides a foundation for pursuing additional work at the graduate level. Further specialized training in mental retardation offers opportunities for qualified persons in administration, supervision, vocational rehabilitation and related fields.

A coordinated program of not less than 30 credits (in addition to the 27 credits in Professional Education required by the School), leading to a comprehensive certification to teach the mentally retarded, as follows.

SpE 215	Child Development	3 cr.
Psy 300	The Psychology of Adjustment	
	or	
SpE 216	Mental Health in the Schools	3 cr.
SpE 220	Introduction to Exceptional Children	3 cr.
SpE 254	Speech Development and Improvement	
	or	
SpE 255	Development of Language in Children	3 cr.
SpE 301	Reading and Language Arts for the Mentally Retarded	3 cr.
SpE 320	Psychology of Mentally Retarded Children	3 cr.
SpE 362	Developmental Reading	
	or	
El 222	Teaching of Reading	3 cr.
SpE 411	Health and Phys Ed and Recreation for the Exceptional	3 cr.

SpE 431	Curriculum and Methods for the Mentally Retarded	3 cr.
Art 330	Arts and Crafts for the Mentally Retarded	3 cr.

COURSE DESCRIPTIONS

Basic Courses In Mental Retardation

SpE 216 MENTAL HEALTH IN THE SCHOOLS 3 cr.

The concept of mental health is developed in terms of optimal human functioning and concentrates on positive aspects and modifications of behavior, rather than on malfunctioning and clinical treatment of mental and emotional disorders. The practical application of mental health principles in the school setting is emphasized. (Given only in summer; regular students take Psy 300.)

SpE 255 DEVELOPMENT OF LANGUAGE IN CHILDREN 3 cr.

Explores levels and sequences of the child's linguistic acquisition at various ages, his sensivity to extra-language information by which he must operate with others, and the complex processes instrumental in the formulation of his responses.

SpE 301 READING AND LANGUAGE ARTS FOR THE MENTALLY RETARDED 3 cr.

Prerequisite: El 222 or SpE 362.
Deals with the preparation and execution of teaching units in reading, vocabulary development, spelling, handwriting, and/or written communication. Emphasis on what retarded children can reasonably be expected to do at elementary and secondary levels.

SpE 320 PSYCHOLOGY OF MENTALLY RETARDED CHILDREN 3 cr.

Prerequisite: SpE 220.
Consideration of retarded children and youth as living, adjusting individuals who respond to many kinds of personal and social situations and who are capable of far more than usually imagined. Ways in which the retarded develop, learn, and adapt to various home, school, community, or sheltered settings.

SpE 411 HEALTH, PHYSICAL EDUCATION AND RECREATION FOR THE EXCEPTIONAL 3 cr.

Prerequisite: SpE 220.
Provides a thorough understanding of a program of health, physical education and recreation as it applies to individuals with mental and physical handicaps from pre-school through adulthood. Special attention will be given to the needs of individuals with developmental problems.

SpE 421 STUDENT TEACHING OF THE MENTALLY RETARDED 3 cr.

Students will be required both to observe and to participate in the teaching of mentally handicapped students. (Ordinarily this course will be offered in conjunction with SpE 451 for summer school students.)

SpE 431 CURRICULUM AND METHODS FOR THE MENTALLY RETARDED 3 cr.

Prerequisite: Qualified seniors.
Consideration of the basic content and method for teaching mentally retarded. Emphasis upon organization of curriculum in the fundamentals and in social and pre-vocational skills for daily living. Resource materials used for instruction at elementary and secondary levels will be explored.

SpE 451 SPECIAL CLASS METHODS FOR THE MENTALLY RETARDED 3 cr.

Prerequisite: SpE 220.
Study of practical methods and materials that can be used effectively with slow-learning children. (Summer only)

SpE 455 DIRECTED ACTIVITIES 1-3 cr.

Prerequisite: SpE 220.
Involves working with exceptional children on an individual or group basis. Department approval for credit will be necessary for students engaged in activities sponsored by various community or cooperating agencies. Students will be required to submit in writing a weekly report of activities. Eighteen clock hours of work with children will be necessary for one (1) semester hour of credit.

SpE 460 SELECTED PROBLEMS IN SPECIAL EDUCATION 1-3 cr.

Prerequisite: Junior and senior majors who qualify by virtue of academic standing and interest.
Critical exploration of problems relating to exceptional children.

SpE 465 EDUCATION OF CHILDREN WITH LEARNING DISABILITIES 3 cr.

Prerequisites: SpE 220, SpE 215, SpE 320.
Designed to bring to the student theory concerning remediation of learning disabilities. Study is devoted to special education of children who exhibit symptoms of reading, writing, and arithmetic disorders, auditory language disorders, expressional language disorders, and perceptual disabilities.

SpE 466 TEACHING THE TRAINABLE MENTALLY RETARDED 3 cr.

Prerequisite: Open to qualified juniors and seniors, and certified teachers.
Provides for an analysis of curriculum and program content for TMR children and adults. Directed toward students who plan to

teach the trainable retarded in public schools, institutional facilities, or sheltered workshops.

Art 330 ARTS AND CRAFTS FOR THE MENTALLY RETARDED 3 cr.

(Offered by the Art Department)

El 222 TEACHING OF READING 3 cr.

(See course description under Elementary Education Department)

El 313 TEACHING OF MATH IN THE ELEMENTARY SCHOOL 3 cr.

(See course description under Elementary Education Department)

(B) SPEECH PATHOLOGY AND AUDIOLOGY

The program in Speech Pathology and Audiology is designed to prepare students for a professional career working with individuals exhibiting speech, hearing, or language disorders of communication. Completion of the curriculum leads to Penna. State Certification to act as a Speech and Hearing Therapist or a Speech Correctionist in the public schools and provides students with the basic skills to pursue careers as speech clinicians in early childhood education programs, public health facilities, or rehabilitative settings. The program also encourages and promotes students' participation in graduate programs of Speech Pathology and Audiology.

Students are obligated to fulfill the General Education requirements as established by the University, the Professional Education requirements set by the School of Education except EdPsy 305 Evaluation Methods, and to complete 40 additional credits in the specialized field and its related areas. An additional requirement is Math 362 Probability and Statistics (see listing under Mathematics Department.)

The specialized courses provide a background in (1) fundamental information applicable to the normal development and use of speech, hearing and language; (2) study of the causes and manifestations of various types of speech, hearing, or language disorders and appropriate diagnostic and remedial procedures; and (3) effective use of information obtained from related disciplines about the sensory, physical, emotional, social, and/or intellectual status of a child or an adult.

The Speech and Hearing Clinic serves as a laboratory for required clinical practice, and student participation in an established speech and hearing program is essential to meet the student teaching requirement.

Students not intending to obtain certification in this field but who are interested in assisting children or adults to develop better communication skills may elect certain courses in the curriculum with permission of the instructor.

The requirements for the area of specialization are as follows:

Speech and Hearing

SpH 111	Fundamentals of Speech and Hearing	3 cr.
SpH 122	Phonetics	3 cr.
SpH 222	Introduction to Audiology	3 cr.
SpH 232	Speech Pathology	3 cr.
SpH 242	Bases of Oral Communication	3 cr.
SpH 251	Anatomy and Physiology of the Speech and Hearing Mechanism	3 cr.
SpH 310	Speech Clinic I	1-3 cr. (1 recommended)
SpH 311	Aural Rehabilitation	3 cr.
SpH 312	Organization & Administration of Speech and Hearing Programs (also counts as Methods Course in Professional Ed. requirements)	3 cr.
SpH 320	Speech Clinic II	1-3 cr. (3 recommended)
SpH 321	Psychology of Speech and Language	3 cr.

Related Areas

SpE 220	Introduction to Exceptional Child	3 cr.
SpE 362	Developmental Reading	3 cr.
	or	
El 222	Teaching of Reading	3 cr.

One elective from the following: 3 cr.

SpE 215	Child Development
Psy 215	Child Development
Psy 300	Psychology of Adjustment
SpE 255	Development of Language in Children
SpE 320	Psychology of Mentally Retarded
Eng 333	Trends in Linguistics

COURSE DESCRIPTIONS

Required Basic Courses

SpH 111 FUNDAMENTALS OF SPEECH AND HEARING 3 cr.

(Prerequisite for all other required courses in the division except Phonetics.)
Introduction to the study of the physiological, acoustical, and scientific processes involved in the production and reception of speech. The genetic development of speech sounds, and factors that hinder or facilitate speech and language acquisition.

SpH 122 PHONETICS 3 cr.

Detailed study of the phonemes of American-English speech from a physical and acoustical point of view. Development of proficiency in the use of the International Phonetic Alphabet for transcription and translation of speech sounds.

SpH 222 INTRODUCTION TO AUDIOLOGY 3 cr.

The auditory function, anatomy of the auditory mechanism, the psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for the hearing handicapped child.

SpH 232 SPEECH PATHOLOGY

Basic orientation to speech disorders, their prevalence, symptoms, causes and treatment. The disorders of articulation and rhythm will be emphasized, with some consideration given to voice problems, cleft palate, cerebral palsy and defects of symbolization.

SpH 242 BASES OF ORAL COMMUNICATION

A study of the communication process with emphasis on the physical characteristics of sound production, transmission and perception of the sound, and the evolvement and use of symbols for meaningful communication. The scientific principles of normal oral communication will be stressed, and language learning will be recognized as the basis for oral communication.

SpH 251 ANATOMY AND PHYSIOLOGY OF THE SPEECH AND HEARING MECHANISM 3 cr.

Consideration of the genetic development, structure, and function of the organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing, and relationships between the systems in the production and reception of speech.

SpH 310 SPEECH CLINIC I 1 cr.

Prerequisite: Approval by advisor. 2 credits recommended.
Orientation to theory and techniques of speech and hearing therapy as applied to specific clients. Introduction to lesson planning and the writing of case histories and reports. Observation of clients and limited participation with clients.

SpH 311 AURAL REHABILITATION

Consideration of the effects of varied degrees of hearing loss sustained by individuals at different stages of development and the study of the total education and rehabilitative procedures for the hard-of-hearing child or adult. Application of the techniques of teaching the hard-of-hearing to persons presenting language problems of other etiologies.

SpH 312 ORGANIZATION AND ADMINISTRATION OF SPEECH AND HEARING PROGRAMS 3 cr.

(Meets requirement for Professional Education Course.)
Consideration of varied procedures in establishing and maintain ing speech and hearing programs. The philosophy and methodology for work with speech- and hearing-handicapped children in the public schools. Techniques of screening and other case finding methods, scheduling, and record keeping, teacher and parental counseling, and coordination with other school activities.

SpH 320 SPEECH CLINIC II 1-3 cr.

Prerequisite: SpH 310. 2 credits recommended
Experience in working with individuals or groups of persons who exhibit speech or hearing problems. Lesson planning, writing of reports, and case histories of a detailed nature.

SpH 321 PSYCHOLOGY OF SPEECH AND LANGUAGE 3 cr.

The nature of speech and language as a behavioral influence and as a communicative code; behavior in response to language, and psychological principles involved. Normal evolvement of social, motor, and speech skills will be emphasized and their inter-relationships in making satisfactory personal adjustments.

SpH 331 SPEECH PATHOLOGY II (ORGANIC) 3 cr.

A study of the etiologies, diagnosis, and symptoms of speech defects associated with structural anomalies and physiological dysfunction. Voice disorders, cleft palate, cerebral palsy, and defects of symbolization will be treated.

Required Courses In Related Areas

SpE 220 INTRODUCTION TO EXCEPTIONAL CHILDREN 3 cr.

(See course description under Special Education and Clinical Service.)

El 222 TEACHING OF READING 3 cr.

(See course description under Elementary Education)

or

SpE 362 DEVELOPMENTAL READING 3 cr.

(See course description under Special Education and Clinical Services.)

Suggested Electives In Related Areas

SpE 215 CHILD DEVELOPMENT 3 cr.

(See course description under Special Education and Clinical Services.)

or

Psy 215 CHILD DEVELOPMENT 3 cr.

(See course description under Elementary Education.)

Psy 300 THE PSYCHOLOGY OF ADJUSTMENT 3 cr.

(See course description under Psychology Department, School of Arts and Sciences.)

SpE 255 DEVELOPMENT OF LANGUAGE IN CHILDREN 3 cr.

(See course description under Education for the Mentally Retarded.)

SpE 320 PSYCHOLOGY OF MENTALLY RETARDED 3 cr.

(See course description under Education for the Mentally Retarded.)

Eng 331 TRENDS IN LINGUISTICS 3 cr.

(See course description under English Department, School of Arts and Sciences.)

Electives (Offerings vary from term to term)

SpH 404 DIAGNOSTIC METHODS 2 cr.

A compilation and evaluation of diagnostic resources applicable to evaluation of speech disorders; bases for selection of appropriate materials in differential diagnoses; interpretation of test results and their significance in planning future therapy.

SpH 410 ARTICULATION DISORDERS 2 cr.

Detailed consideration of the speech-sound production disorders in children and adults. Etiology of articulation disorders, methods of testing articulation, and techniques of therapy for persons exhibiting articulation disorders. Current thinking and research in the field is emphasized. Open only to majors.

SpH 412 CLEFT PALATE 2 cr.

Study of the embryology of the facial and cranial skull, with emphasis on the development of the oral pharyngeal structures associated with speech; theories of etiology, classification of lip and palatal clefts; methods of surgical and prosthetic repair, with consideration of the appropriateness and feasibility of a specific procedure; principles and methods of speech and language training.

SpH 416 STUTTERING 2 cr.

Study of the nature of the stuttering disorder and its effects on the dynamics of personality development, evaluation of prevalent casual theories and their implications for both symptomological

and psychological methods of treatment as adapted to individuals or group situations. Review of pertinent and recent research topics.

SpH 418 VOICE 2 cr.

Advanced study of the theory of voice production, with emphasis on physiology, pathology and malfunctioning which produce voice defects; the possible relationship of disorders of voice and disorders of personality; diagnostic methods and therapeutic considerations for both organic and psychogenic disorders. Special attention will be given to therapy for the laryngectomized.

SpH 440 ADVANCED AUDIOLOGY 2 cr.

Identification of types of hearing loss by special audiological tests – speech audiometry, Bekesy, SAL, tone decay, PGSR; interpretation of the audiogram and its relevancy to diagnosis and remedial procedures; functions and characteristics of hearing aids with respect to speech reception and discrimination.

SpH 450 SPEECH SCIENCE 2 cr.

Physiological, neurological, and acoustical study of the communicative process, with special attention to speech monitoring, controls and perception. Emphasizes current research methodology, clinical instrumentation and laboratory techniques.

SpH 474 FACULTY-STUDENT RESEARCH PROJECTS 1-2 cr.

Investigation of worthwhile problems within the limits of the resources of the Speech and Hearing Clinic. Collection of data, data analysis, and the writing of an article to be submitted for publication. Open only to seniors, and with the permission of the faculty. Should be taken for two semesters, 1 credit each.

SpH 330 SPEECH CLINIC III 2 cr.

Experience, of an independent nature, in working with individuals or groups of persons who exhibit speech or hearing problems. The course is offered for those persons who specifically desire or need practicum experience in addition to speech Clinic II.

Courses For Non-Majors

SpH 254 SPEECH DEVELOPMENT AND IMPROVEMENT 3 cr.

Study of aspects of speech and hearing problems pertaining to the classroom situation. Types of speech and hearing disorders, conducting speech improvement lessons, classroom aids for the speech- and hearing-defective child, and school and community resources for these children. (Required for majors in Special Education: Mentally Retarded, and suggested for Elementary Education majors.)

SpH 354 AUDIOMETRY FOR PUBLIC SCHOOL NURSES 3 cr.

Intensive review of the physiology of hearing; the etiologies and

classifications of hearing loss; the use of audiometric testing equipment in the schools; interpretation of the audiogram; and the role of the nurse in public health hearing programs.

(C.) REHABILITATION EDUCATION

The program leading to the degree of Bachelor of Science in Education, specializing in Rehabilitation Education, is offered to students seeking career opportunities with health and welfare agencies and institutions. Although originally identified with the needs of the war disabled, the benefits of Rehabilitation have been extended to the larger requirements of civilian handicapped. This program provides basic training and a foundation for pursuing additional work at the graduate level. Non-majors may elect certain courses with permission of the instructor.

In addition to the University's requirement of 52 credits in General Education, requirements for the degree in Rehabilitation Education include 62 or 63 more credits, distributed as follows:

Psychology		9 credits
Psy 300	The Psychology of Adjustment	3 cr.
Psy 351	Intro to Psychol Measurement	3 cr.
Psy 357	Abnormal Psychology	3 cr.

Special Education		12 credits
SpE 215	Child Development	3 cr.
SpE 220	Intro to Exceptional Children	3 cr.
SpE 255	Development of Language in Children	3 cr.
SpE 320	Psychology of Mentally Retarded Children	3 cr.

Other		12 credits
Biol 151	Human Physiology	3 cr.
CounEd 251	(Counselor Education) Fundamentals of Guidance	3 cr.
Soc 333	Juvenile Delinquency	3 cr.
Soc 338	Introduction to Social Work	3 cr.
Rehabilitation Education		29-30 credits

COURSE DESCRIPTIONS

SpR 211 THE PHYSICAL BASIS OF DISABILITY 3 cr.

Prerequisites: Biol 103, 104, SpE 220, Biol 151.
Exploration of such selected disabilities of individuals as: the blind and visually handicapped; the cardiac, diabetic, and amputee; the deaf and hard-of-hearing; the cerebral-palsied, cleft palate, the cerebro-vascular, and the laryngectomized.

SpR 222 PSYCHOLOGICAL BASIS OF DISABILITY 3 cr.

Prerequisites: Psy 201, Soc 151.
Clarification of emotional and social responses which influence the behavior and relationships of handicapped individuals and rehabilitation workers alike.

SpR 313 PRINCIPLES AND METHODS OF REHABILITATION 3 cr.

Prerequisite: SpR 211.
Delineates the roles of members of the professional disciplines of physical, orthopedic, and internal medicine; psychiatry, psychology, otology, ophthalmology, audiology, speech pathology, prosthodontics, physical and occupational therapy, special education; appropriate use of such diagnostic information in evaluating and helping the disabled individual.

SpR 324 OCCUPATIONAL INFORMATION 3 cr.

Types of jobs, levels of education or skill necessary for occupational success, methods of job training and assessment, and the influence of appropriate employment on the personality development and social outlook of the disabled, legal aspects and legislation affecting job placement.

*SpR 405 FIELD TRAINING IN REHABILITATION 12 cr.

Emphasizes development of the student rehabilitation coordinator by working with disabled clients in a public or private agency. Writing and analysis of case reports, counseling of clients, understanding of agency responsibilities and limitations, referral, follow-up, and final evaluation of client's ability to function with various degrees of autonomy.

*SpR 406 REHABILITATION PRACTICUM 2-3 cr.

Discussion of current topics of interest in the field, such as state and federal legislation; new prosthetic advances, proposals of the National Rehabilitation Association; or recent techniques in working with specific disabilities.

SpR 412 MOBILITY TRAINING FOR THE BLIND 3 cr.

Prerequisites: Rehabilitation majors, normal program sequence; for non-majors, Psy 201 and SpE 220.
The nature of blindness; the psychological and social effects of visual deprivation; use of intact sensorium in adjustment of blind; techniques and principles of teaching blind how to orient themselves in the physical environment and to retain mobility.

COUNSELOR EDUCATION DEPARTMENT

GEORGE L. SPINELLI, CHAIRMAN; SAYLOR, SHAFFER, PESCI, WASHBURN, WILSON, WORZBYT.

The courses listed below are available, as electives and as offered, to undergraduate students in Education, in-service teachers, and other school personnel seeking a broad understanding of helping roles in a school program of guidance services. These courses are not designed for those who would aspire to become school counselors. For more information on counselor education programs see the current Graduate School Bulletin.

COURSE DESCRIPTIONS

CnEd 251 FUNDAMENTALS OF GUIDANCE 3 cr.

This course is an elective for upper level undergraduate students in Education and aims to provide a broad understanding of the role of the classroom teacher in a school guidance program.

CnEd 252 GUIDANCE IN SCHOOL SETTINGS 3 cr.

This is a survey course in guidance designed as an elective for in-service teachers and school personnel other than counselors.

CnEd 253 COUNSELING IN SCHOOL SETTINGS 3 cr.

This is an elective course designed to provide in-service teachers and school personnel, other than counselors, a basic understanding of the knowledge, information, and skills appropriate to counseling with individuals and groups.

THE SCHOOL OF FINE ARTS

WILLIAM R. BECKER, ACTING DEAN

The School of Fine Arts was established by the Board of Trustees of Indiana University of Pennsylvania in May of 1966. The School has two departments: The Art and Art Education Department, and the Music and Music Education Department.

The General Education requirements are the same as for all other Schools of the University. The Departments of the School have slight variations and substitutions in specific courses needed to meet these requirements.

Admission to the School of Fine Arts has one additional step beyond the admission requirements for other Schools in the University. Prospective Art majors must submit a portfolio according to instructions issued by the Art Department, Sprowls Hall 144. This portfolio is evaluated by a jury of the Art Department faculty, and is considered along with the College Board scores and the high school rank as qualifications for admission. The Music Department requires an audition of the candidate. Instructions for the preparation of this audition are available in the Music Department office, Cogswell 105.

The Bachelor of Science in Education degree received by Art and Music Education majors also carries certification, which authorizes the graduate to teach Art or Music in the schools of the Commonwealth of Pennsylvania.

ART AND ART EDUCATION DEPARTMENT

BENJAMIN T. MILLER, CHAIRMAN; BALSIGER, BEN-ZVI, BURWELL, V. CLAY, JR., CRONAUER, DeFURIO, DONGILLA, DROPCHO. FREUND, HAMILTON, INNES, JOHNSON, LOVETTE, McVITTY, ROSS, SEELHORST, J. SLENKER, R. SLENKER, VISLOSKY, WERT.

The entering student will have been advised of all requirements of the University and the Department when he makes formal application for admission.

The art program includes both general and professional studies, directed toward the development of the student's creative and expressive abilities.

CURRICULA

Some students may choose art teaching as a career, while others may choose to gain a knowledge of art applicable to related fields. In every case, the undergraduate courses are basic to advanced. Degrees offered by the Department are the Bachelor of Science in Education with an Art major and the Bachelor of Arts in Art (offering concentrations in Painting, Drawing, and Sculpture; or Art History; or Design). The degree in Education provides certification for teaching Art at all levels of the public schools in Pennsylvania.

The Department also offers a minor in Art.

Core Program

In fulfilling the University's General Education requirement, Art majors are required to include Psy 201, General Psychology, and Mus 101, Introduction to Music, or Eng 103, Introduction to Theater. Requirements for ALL Art majors, beyond the University's General Education requirement, are 30 credits in Art, as follows:

Art 111	Drawing (All Media)	2 cr.
Art 112	Drawing (Comp and Figure)	2 cr.
Art 113	Design (Color and Design)	2 cr.
Art 114	Design (Volume and Space)	2 cr.
Art 115	The Art of Western Man to 1200	3 cr.
Art 116	Western Art: Renaissance to Baroque	3 cr.
Art 211	Painting (Water-Base Media)	2 cr.
Art 212	Painting (Oil and Mixed)	2 cr.

Art 213	Crafts I	2 cr.
Art 214	Ceramics I	2 cr.
Art 215	Sculpture	2 cr.
Art 216	Metalry I	2 cr.
Art 217	Printmaking I	2 cr.
Art 218	Graphic Design	2 cr.

B.A. in Art

The Department requires that all candidates for the degree of bachelor in Arts in Art present 6 credits in Foreign Language at the Intermediate Level.

The Department provides for concentration in any one of the three fields in fulfilling the requirements for the Bachelor of Arts in Art. In addition to the Core Program the requirements for individual concentrations are as follows:

Art History Concentration		30 credits
Art 321	Ceramics II	2 cr.
Art 410	Primitive and Pre-Greek Art	3 cr.
Art 411	Modern Art	3 cr.
Art 412	Classical Art	3 cr.
Art 413	Seminar in Art	2 cr.
Art 414	Medieval Art	3 cr.
Art 415	Italian Renaissance Art	3 cr.
Art 416	Northern Renaissance Art	3 cr.
Art Studio		8 cr.
Painting, Sculpture Concentration		34 credits
Art 321	Advanced Drawing	2 cr.
Art 411	Modern Art	3 cr.
Art 413	Seminar in Art	2 cr.
Art History elective		3 cr.
Art Studio		24 cr.
Design Concentration		34 credits
Art 321	Advanced Drawing	2 cr.
Art 411	Modern Art	3 cr.
Art 413	Seminar in Art	2 cr.
Art History elective		3 cr.
Art Studio		24 cr.

B.S. in Education (Art Majors)

In addition to the Core Program, requirements for the degree of Bachelor of Science in Education with an Art major are 29 credits in Art plus 14 credits in Education, as follows:

Art

Art 311	Painting (All Media)	2 cr.
Art 312	Ceramics II	2 cr.
Art 313	Sculpture	2 cr.
Art 314	Costume and Theatre Arts	2 cr.
Art 315	Printmaking II	2 cr.
Art 316	Metalry II	2 cr.
Art 317	Arts and Crafts in El. Ed.	3 cr.
Art 318	Arts and Crafts in Secon. Ed.	3 cr.
Art 411	Modern Art	3 cr.
Art 413	Seminar in Art	2 cr.
Art electives		6 cr.

Education

Ed 441	Art Student Teaching	12 cr.
Ed 442	Professional Practicum	2 cr.
LRes 301	Audio Visual Education	2 cr.
EdPsy 302	Educational Psychology	3 cr.
FdEd 302	History & Philosophy of American Education	3 cr.

Minor in Art

The minor in Art consists of 15 to 21 credits, of which the following are required:

Art 111	Drawing (All media)	2 cr.
Art 112	Drawing (Comp. and Figure)	2 cr.
Art 113	Design (Color and Design)	
	or	
Art 114	Design (Volume and Space)	2 cr.
Art 115	Art of Western Man to 1200	
	or	
Art 116	Western Art: Renaissance to Baroque	
	or	
Art 411	Modern Art	3 cr.
Art 211	Painting (Water-Base Media)	2 cr.
Art 213	Crafts I	2 cr.
Art 215	Sculpture	2 cr.
Art electives		

COURSE DESCRIPTIONS

General Education

Art 101 INTRODUCTION TO ART (elective for all students) 3 cr.

Designed to introduce to the student the significance of art as related to contemporary living and our historical heritage.

Art 115 THE ART OF WESTERN MAN TO 1200 3 cr.
(formerly Art History I)

Study of the art of man from Prehistoric times to the Renaissance. Man's artistic development is seen in light of the political, social, economic and religious events influencing him.

Art 116 WESTERN ART: RENAISSANCE TO BAROQUE (formerly Art History II) 3 cr.

Study of art from the Renaissance to modern times, in light of the historical events which affect man's artistic impulses and development.

Core Courses

Art 111 DRAWING 2 cr.
(Drawing in All Media)

A foundation course in drawing, including a study of the structure of drawing and composition with a variety of media and subject matters.

Art 112 DRAWING 2 cr.
(Composition and Figure Drawing)

Figure construction, anatomy, and life drawing are studied. Included are pictorial design and composition.

Art 113 DESIGN 2 cr.
(Color and Design)

Basic elements and principles of design and color are studied. Basically a course in design in two dimensions.

Art 114 DESIGN 2 cr.
(Design in Volume and Space)

Provides the student with a wide variety of experiences in three-dimensional design. Emphasis is on experimentation with materials and ideas.

Art 211 PAINTING 2 cr.
(Water Base Media)

Primarily concerned with transparent water color painting, but includes gouache, mixed media, and experimental approaches to painting in water-base media.

Art 212 PAINTING 2 cr.
(Oil Color and Mixed Media)

A beginning course in painting with opaque plastic media. The student is introduced to the technical as well as the aesthetic and philosophical bases of painting.

Art 213 CRAFTS I 2 cr.
(Crafts in Metal and Wood)

An introductory experience, with an emphasis on and understanding of, and involvement with, the crafts in metal and wood.

Art 214 CERAMICS I 2 cr.
(Pottery and Ceramics)

Prerequisite to Art 312.
General introduction to the techniques and aesthetics of clay. The student will work both at the wheel and with hand building methods.

Art 215 SCULPTURE 2 cr.
(Modeling and Sculpture)

Beginning sculpture, approached from the standpoint of carving. Work is attempted in wood, stone and other related materials. Emphasis is on the study of form, as well as visualizing in the third dimension.

Art 216 METALRY I 2 cr.
(Jewelry)

Prerequisite to Art 316.
The designing and creating of handmade sterling silver jewelry using semiprecious stones and related materials. Approached from the viewpoint of the beginning craftsman, learning the basic processes of metal fabrication.

Art 217 PRINTMAKING I 2 cr.
(Graphic Arts)

Prerequisite to Art 315.
The basic techniques of graphic expression, including: relief, intaglio, lithograph, and serigraph prints.

Art 218 GRAPHIC DESIGN 2 cr.
(Lettering, Commercial Art and Illustration)

Students explore various techniques and how they can be translated into commercial art work, package design, trademark and other design problems. Lettering is stressed, both instant type and hand lettering.

Upper Level Courses

Art 311 PAINTING 2 cr.
(All Media)

The student is given the opportunity for continued growth in his creative and expressive ability through painting. Experiences are offered in the transparent and opaque qualities of oil, synthetic and water base media.

Art 312 CERAMICS II 2 cr.

Prerequisite: Art 214.
The student concentrates in an area of his choice. An introduction is given to kiln techniques and methods of glaze testing.

Art 313 SCULPTURE 2 cr.
(Contemporary Media)

Emphasizes the additive or constructed approach to sculptural concepts. The student becomes involved with welding, plastics, metal, plaster, and related materials.

Art 314 COSTUME AND THEATRE ARTS 2 cr.

Exploration of traditional and experimental design for theatre and theatre-related experiences. Theory and practice in design, construction, painting, lighting, costuming, and properties.

Art 315 PRINTMAKING II 2 cr.

Prerequisite: Art 217.
The basic techniques of graphic expression are extended to provide the student with a wider range of possibilities within the techniques of printmaking.

Art 316 METALRY II 2 cr.
(Lapidary Art, Metalsmithing, Casting, Enameling)

Prerequisite: Art 216.
Additional jewelry making and metalworking processes employing lapidary art, beginning metalsmithing (raising), elementary casting and enameling on metal.

Art 321 DRAWING 2 cr.
(Advanced Drawing)

Prerequisites: 2 lower level drawing courses.
Advanced course in drawing, designed to meet the problems of the student who has some background in the field. Problems of composition, two- and three-dimensional relationships, and surface are discussed on an individual basis.

Art 410 PRIMITIVE AND PRE-GREEK ART 3 cr.

Survey of the painting, architecture and sculpture of Prehistoric Man: Egypt and the Near East, as well as the Art of Primitive Man of later times – The American Indian, African Art, and the Art of Oceanic. (Offered in alternate semesters.)

Art 411 MODERN ART 3 cr.
(Formerly Art History III)

Majors only.
The great revolutionary movements which began about 1850 and the trends of contemporary arts as they are vital to the art students of today.

Art 412 CLASSICAL ART 3 cr.

Historical survey of the painting, architecture, sculpture, decorative and utilitarian arts of the Classical period; includes the art of pre-Greek cultures (Minoan-Mycenaean), Greek, Etruscan, and Roman. (Offered in alternate semesters.)

Art 413 SEMINAR IN ART 2 cr.

Intended to help students develop adequate vocabularies and methods to be used in discussion and criticism of works of art.

Art 414 MEDIEVAL ART 3 cr.

Art History Majors, by special arrangement.
Art and architecture of Europe during the Middle Ages, beginning with a study of Early Christian and Byzantine art and concluding with the art of the Romanesque and Gothic periods.

Art 415 ITALIAN RENAISSANCE ART 3 cr.

Art History Majors, by special arrangement.
Covers the span of Italian art from the 1400's through 1850 and the Mannerist movement. Special attention paid to the great masters of the period.

Art 416 NORTHERN RENAISSANCE ART 3 cr.

Art History Majors, by special arrangement.
Explores the phenomena of art North of the Alps from 1400 to 1600, especially as it appears in the Lowlands, as well as side explorations into the art of France, Germany, Austria and the court at Prague.

Art 417 BAROQUE AND ROCOCO ART 3 cr.

A general survey of the art from 1575-1775. The survey will include architecture, sculpture, painting and the other arts.

Art 418 PRACTICUM IN SLIDE ROOM PROCEDURES 1 cr.

A practicum course devoted to the study of slide room practices and techniques: organization, cataloguing, filing, mounting and labeling of slides. (Art History majors and minors only.)

Art 419 MUSEUM INTERNSHIP 2-6 cr.

(Credits depend upon length of experience)
The student will work at the cooperating museum under the supervision of the museum director. Museum techniques and practices in an "on-the-job" training situation will be stressed.

Professional Education Courses

Art 317 ARTS AND CRAFTS IN ELEMENTARY EDUCATION 3 cr.

Prerequisite to student teaching.
Examines children's artistic development, art programs, planning, motivation and evaluation. Weekly teaching experience is an integral part of the course.

Art 318 ARTS AND CRAFTS IN SECONDARY EDUCATION 3 cr.

Prerequisite to student teaching.
The relationship of art education to the total secondary curriculum is studied to determine the goals of junior-senior high school art. The adolescent and his creative products are analyzed to help the prospective art teacher to identify himself with the problems of his students.

Ed 441 ART STUDENT TEACHING AND DIRECTED STUDENT ACTIVITIES 12 cr.

The prospective art teacher is given many opportunities, under capable supervision, to guide the creative efforts of students at all age levels in the primary, elementary, junior, and senior high schools. Current philosophies of general and art education are

applied in a practical teaching situation. Emphasis is placed on the creative growth of teacher and pupil.

Ed 442 PROFESSIONAL PRACTICUM 2 cr.
(including School Law)

Consideration is given to recent education trends and methods, art curricula, and to planning of art courses for all grade levels. Practicum also includes professional readings, discussions, observations, and the accumulation and organization of pertinent teaching materials.

Electives

The work will be mainly individual, experimental and in depth. These studio workshop courses stress advanced techniques in the particular field of study. No student may enter advanced courses until he has completed the lower level requirements of that course. Students taking advanced courses are required to have the necessary tools and will also make their own provisions for the supplies and materials needed for these courses.

All advanced electives can be taken for 2, 4, or 6 credits with consent of the instructor.

Art 451 ADVANCED CRAFTS 2 cr.

Desigend to have the student explore the crafts area in depth. The design and contruction of functional objects will be undertaken, with emphasis on innovation.

Art 452 ADVANCED CERAMICS 2 cr.

Prerequisites: Art 214 and 312.
Continued exploration of the field of ceramic production, along with kiln firing and glaze formulation.

Art 453 SCULPTURE 2 cr.
(Advanced Sculpture)

Designed to give the student the opportunity to pursue independent study in sculpture. The materials and processes will be of his choosing and the work related to his own concepts, with the hope that these concepts will be broadened.

Art 454 PAINTING 2 cr.
(Advanced Painting)

Individual experimentation and exploration by the student painter; investigation of the various technical approaches. Students are helped to discover their individually unique methods of self expression.

Art 455 GRAPHIC DESIGN 2 cr.
(Advanced Commercial Art)

Stresses advanced techniques in layout and illustration. The student explores ideas, such as invention of trademarks and how products are brought about. Layouts are analyzed as to their quality. Package design is studied.

Art 457 PRINTMAKING 2 cr.
(Advanced Printmaking)

The student elects to study the print in greater depth, and concentrates his interest in two of four basic printmaking processes. He works toward development of his own techniques and working processes.

Art 459 FABRICS 3 cr.

Provides the student with a working knowledge in the design and execution of projects in weaving, macrame, and related areas. Other fabric techniques will be available for the students to explore as desired.

Art 460 ADVANCED METALRY 2 cr.
(Jewelry)

Design and the processes associated with the art of metalry are given greater concentration. The developing craftsman is encouraged to investigate, in depth, one or more of the metal arts as an extension of the basic courses.

Special Courses

Art 330 ARTS AND CRAFTS FOR THE MENTALLY RETARDED 3 cr.

The materials and processes of arts and crafts are studied for opportunities they offer in the training, therapy and education of students who are mentally retarded or crippled, or need special help for any reason.

HE 213 PRINCIPLES OF DESIGN 2 cr.

Principles of design and color are studied and applied to a crafted object. The major emphasis is on the aesthetic quality inherent in designing with materials.

El 213 ART FOR ELEMENTARY GRADES 2 cr.

The course is basic to the creative use of art materials and an understanding of the development of the capacities of children through art.

El 214 TEACHING ART IN ELEMENTARY GRADES 3 cr.

Prerequisite: El 213.
Students are offered in-depth experiences in two-and three-dimensional materials relative to art and craft for the elementary school child.

MUSIC AND MUSIC EDUCATION DEPARTMENT

J. H. WILDEBOOR, INTERIM CHAIRMAN; BACHMANN, W. BECKER, BERNAT, BIRD, BORST, BRAMAN, CHA, C. DAVIS, DeCESARE, DiCICCO, DIETZ, FORNEAR, E. J. FRY, GODT, GOLZ, A. HARROLD, HULBERT, HOOVER, INTILI, JOHNSON, KESSLER, KNAB, LLOYD, McNAUGHTON, MALITSKY, NELSON, G. OLMSTEAD, ORENDORFF, PERKINS, D. J. PERLONGO, S. T. PERLONGO, POLAND, SARTORI, J. STAPLES, THORELL, VOUKLIZAS, WEBER.

Admission to the Music and Music Education Department requires satisfactory completion of an audition, in addition to the University's general requirements. Detailed instructions will be sent to the applicant on request.

Degrees offered by the department are the Bachelor of Arts in Music, the Bachelor of Fine Arts in Music, and the Bachelor of Science in Education with a Music major.

CURRICULA

The program leading to the Bachelor of Arts in music has been designed to give the Liberal Arts student a considerable, but not necessarily a professional experience in music. The student will not be preparing specifically for a vocation or for further study in music, but rather will expect to gain a broad understanding of the culture in which he lives, and the function of music in that culture. By the nature of his studies, however, the student will have an excellent base for graduate study in the area of concentration and background for a rich cultured life. The student seeking this degree has the choice of three concentrations: Music Literature, Music Performance, and Music Theory.

The program leading to the Bachelor of Fine Arts in Music (equivalent to the Bachelor of Music Degree) is a flexible program with a major in one of 18 areas of performance. The graduate of this program will be prepared for graduate study or for an audition for membership in a professional organization.

The program leading to the Bachelor of Science in Education with a Music major leads to certification to teach in the public schools of Pennsylvania.

Core Program

Requirements for ALL Music majors, beyond the University's General Education Requirements, are 28 credits in Music, as follows:

Mus 115, 116, 215, 216,	Theory I through IV	12 cr.
Mus 111, 112	Sight Singing I and II	4 cr.
Mus 113, 114	Ear Training I and II	2 cr.
Mus 220, 221	Music Literature I and II	4 cr.
Mus 301, 302	Music History I and II	6 cr.

It must be noted that Music majors may not include Mus 101, Introduction to Music, in fulfilling the Humanities segment of the General Education requirement. Also, music majors must take Rhythm and Movement in substitution for 1 credit in Physical Education.

Special Requirements

All students must participate in two (minimum) performing ensembles each semester.

Students must attend (1) all Departmental and Area Recitals and (2) twelve campus recitals and concerts per semester.

B.A. in Music

In addition to the Core Program, requirements for the Bachelor of Arts in Music include 22 additional credits in Music, of which 16 credits must be in the concentration selected, as follows:

Music Performance Concentration —	
Applied Music Major	
or	
Music Theory Concentration —	
Theory Courses	
or	
Music History and Literature Concentration —	
Music History Courses	16 cr.
Music Electives	6 cr.

B.F.A. in Music (Bachelor of Music)

In addition to the Core Program, requirements for the Bachelor of Fine Arts in Music, which is a degree in performance, are 44 more credits, as follows:

Major Applied Music	32 cr.
Mus 217, 218 – Keyboard Harmony I and II	2 cr.
Upper Division Music Electives	10 cr.

Piano Proficiency required.
Junior and senior Recitals required in the Major.

B.S. in Education (Music Majors)

In meeting the University's General Education requirement, students seeking the degree of Bachelor of Science in Education with a Music major must elect Hist 104, History of the United States and Pennsylvania II, and Psy 201, General Psychology, in fulfilling the Social Sciences segment.

In addition to the Core Program, requirements for the B.S. in Education include 35 more credits in Music and 6 credits in Methods, as follows:

Music

Mus 311	Fundamentals of Conducting	2 cr.
Mus 161	Class Woodwinds I	1 cr.
Mus 159	Class Brass I	1 cr.
Mus 155	Class Strings I	1 cr.
Mus 157	Class Percussion I	1 cr.
Mus 151, 152	Class Vocie I and II	2 cr.
	Private Instruction in principal instrument	14 cr.
	Music electives	*13 cr.

Methods

Mus 331	Elementary Methods	2 cr.
Mus 333	Secondary Methods	2 cr.
Mus 334	Instrumental Methods	2 cr.

*Students whose principal instrument is not piano must enroll for piano instruction as part of this elective. Also, secondary instruments (as described below) will be taken as part of this elective credit.

Each student must declare a principal performing medium. Those who elect voice as their principal instrument must normally elect piano as a secondary instrument; those who elect piano as their principal instrument must normally elect voice as a secondary instrument.

Student teaching will include all areas of music education at all levels of public schools.

COURSE DESCRIPTIONS

Mus 101 INTRODUCTION TO MUSIC 3 cr.

This course presumes no technical background, but does utilize as fully as possible the varied musical experiences of each individual to help him extend his interest as far as possible. Attendance at various concerts of college organizations, cultural life events, and visiting artist concerts are required, to augment the listening experiences of the student.

Music Theory And Composition

Mus 111 SIGHT SINGING I 2 cr.

Designed to develop the student's skill at interpreting written music by the use of his own voice.

Mus 112 SIGHT SINGING II 2 cr.

Prerequisite: Mus 111 with 2.0 or better.
Continuation of the development of skills in the areas of Sight Singing I.

Mus 113 EAR TRAINING I 1 cr.

Develops dictation skills and notation in the following areas: primary harmonies in all inversions, and melodic dictation with implied and actual harmonies.

Mus 114 EAR TRAINING II 1 cr.

Prerequisite: Mus 113 with 2.0 or better.
Continuation of the development of dictational and notational skills of Ear Training I.

Mus 115 THEORY I 3cr.
Mus 116 THEORY II 3 cr.
Mus 215 THEORY III 3 cr.

(Three consecutive semesters.)
Study of the compositional devices of the 18th and 19th centuries. Emphasis upon melodic, harmonic, rhythmic, and formal structures, with occasional reference to contrapuntal implications.

Mus 216 THEORY IV 3 cr.

Prerequisites: Mus 115, 116, 215.
Study of the compositional devices of the latter half of the 19th century and first half of the 20th century.

Mus 217 KEYBOARD HARMONY I 1 cr.

Prerequisite: Nominal facility at the keyboard.
Designed to develop keyboard skills in the student, so he may realize and produce in sound basic harmonic progressions.

Mus 218 KEYBOARD HARMONY II 1 cr.

Prerequisite: Mus 217.
Continuation of Keyboard Harmony I, involving chromatic harmony and more complex progressions.

Mus 304 FORM AND ANALYSIS I 2 cr.

Prerequisite: Mus 216.
Thorough study of the smaller forms of music.

Mus 305 FORM AND ANALYSIS II 2 cr.

Prerequisite: Mus 304.
Thorough study of the larger forms of music.

Mus 306 COUNTERPOINT I 2 cr.

Prerequisite: Mus 216.
After study and analysis of the style of the 16th Century contrapuntal writing, the student will do original writing using the techniques and devices of the period. As time permits, the same approach will be made to explore the style of the 17th and 18th Century composers.

Mus 307 COUNTERPOINT II 2 cr.

Prerequisite: Mus 306.
Continuation of the study, analysis, and restricted writing of the 17th and 18th Century composers. Consideration will be given to the free contrapuntal techniques used by later composers.

Mus 308 FUGUE AND CANON 2 cr.

Prerequisite: Mus 306.
Application of contrapuntal techniques within these two specific forms through analysis, assigned exercises, and creative writing.

Mus 309 ORCHESTRATION I 2 cr.

Prerequisite: Mus 216.
All the instruments of the orchestra are studied from the viewpoint of their contribution to the total sound of the ensemble. Ranges and timbres are considered, as well as actual arranging of selected music.

Mus 310 ORCHESTRATION II 2 cr.

Prerequisite: Mus 309.
A continuation of Orchestration I.

Mus 315 THEORY V 3 cr.

Prerequisite: Mus 216

Many of the harmonic idioms of the past half century are considered, such as: comparative analysis of dissonance; polytonality; polyrhythms; atonalism and the 12-tone system; and microtonalism. Original writing in these styles required.

Mus 411 COMPOSITION I 2 cr.

Prerequisite: Mus 216.
Instruction in Composition I is, of necessity, highly individualized. Compositional devices are studied through the analysis of works by major composers. Students write original works.

Mus 412 COMPOSITION II 2 cr.

Prerequisite: Mus 411.
A continuation of Composition I. Outstanding works will be programmed by University organizations.

Music Literature And History

Mus 220 MUSIC LITERATURE I 2 cr.

Major works are studied and analyzed as to form, style, and historical placement.

Mus 221 MUSIC LITERATURE II 2 cr.

Continuation of Music Literature I.

Mus 301 HISTORY OF MUSIC I

Study of the development of music, from the ancient Greek and Roman cultures through the Baroque period. Although the approach is a historical one, considerable analytic listening is required.

Mus 302 HISTORY OF MUSIC II 3 cr.

Starting in the 18th Century, with Haydn and Mozart, History of Music II is the Study of the development of music to the present. Analytic listening is required through all available sources.

Mus 316 LITERATURE OF THE MAJOR I 2 cr.

The student researches the literature of his major instrument or voice with the assistance of his private instructor and the instructor of the course.

Mus 317 LITERATURE OF THE MAJOR II 2 cr.

The student continues his research from Literature of the Major I.

Mus 320 MUSIC OF THE ANCIENT WORLD 3 cr.

Prerequisites: Mus 316, 317.
Concentrated study of music from the early Greeks up to the Middle Ages.

Mus 321 MUSIC OF THE MIDDLE AGES 3 cr.

Prerequisites: Mus 316, 317.
Starting with the Jongleurs, Troubadors, and Trouveres of the Early Middle Ages, this course deals with the literature of music through English and Burgundian Schools at the close of the Middle Ages.

Mus 322 RENAISSANCE MUSIC 3 cr.

Prerequisites: Mus 316, 317.
Beginning with Ockeghem and ending with Palestrina and his contemporaries, the music literature of this age is carefully and thoroughly studied.

Mus 323 THE BAROQUE ERA 3 cr.

Prerequisites: Mus 301, 302.
Extends from Monteverdi through Bach and Handel, and considers vocal and instrumental forms, styles, and practices of the era.

Mus 324 EIGHTEENTH CENTURY MUSIC 3 cr.

Prerequisites: Mus 301, 302.
Although Mozart and Haydn comprise the greater portion of the

18th Century music, the Rococo Period involves D, Scarlatti and C.P.E. Bach as well.

Mus 325 THE EARLY ROMANTIC PERIOD 3 cr.

Prerequisites: Mus 301, 302.
Beethoven, Schubert, Rossini, Weber, Mendelssohn, Berlioz, Schumann, and Chopin are the major composers to be studied in the Early Romantic Period.

Mus 326 THE LATE ROMANTIC PERIOD 3 cr.

Prerequisites: Mus 301, 302.
Wagner, Verdi, Glinka, Bruckner, Meyerbeer, Liszt, Gounod, Brahms, Offenbach, Smetana, J. Strauss, Grieg, Bizet, Moussorgsky, Saint-Saens, Tschaikowsky, Massenet, Franck, Borodin, Rimski-Korsakoff, Wolf, R. Strauss, Mahler, Faure, Puccini, Dvorak, Mac Dowell, and Elgar are the major composers of this study.

Mus 420 CONTEMPORARY MUSIC 3 cr.

Prerequisites: Mus 301, 302.
Beginning with Debussy, Ravel and the other impressionists, touching on Schoenberg, Stravinsky, Webern, Honneger, Milhaud, et al. Contemporary Music ends with today and tomorrow. Various trends, styles, techniques are noted: judgments are attempted on the more experimental forms; limited predictions of trends are ventured.

Mus 421 AMERICAN MUSIC 3 cr.

Prerequisites: Mus 301, 302.
American Music is a study of the History and Literature of Music in America from 1600 to the present day.

Conducting

Mus 311 FUNDAMENTALS OF CONDUCTING 2 cr.

Emphasis placed on the fundamental physical skills of the conducting process; various beat patterns are mastered, and elementary score reading and interpretation considered.

Mus 312 CHORAL CONDUCTING 2 cr.

Prerequisite: Mus 311.
Provides the opportunity for the student to apply his basic conducting techniques to choral music. Each student conducts the rest of the class in many of the standard choral works of the literature. Also includes a survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction.

Mus 313 INSTRUMENTAL CONDUCTING 2 cr.

Prerequisite: Mus 311.
Provides the student the opportunity to apply his basic conducting skills to various instrumental ensembles. Also includes a survey of suitable literature, organizational problems, audition procedures, rehearsal techniques, program building, and interpretation.

Mus 401 CHORAL SCORE READING 2 cr.

Prerequisites: Mus 216, 312.

Mus 402 INSTRUMENTAL SCORE READING 2 cr.

Prerequisites: Mus 216, 313.

Music Education

El 211 MUSIC FOR THE ELEMENTARY GRADES 2 cr.

(See the Elementary Education Department, School of Education, for a course description.)

El 212 TEACHING MUSIC IN THE ELEMENTARY GRADES 3 cr.

(See the Elementary Education Department, School of Education, for a course description.)

Mus 331 ELEMENTARY METHODS 2 cr.

Includes analytical study of texts, recordings, equipment, instruments, and other materials suitable to musical development of elementary pupils; proper treatment of the child voice; selection, use, and teaching of rote songs; rhythmic activities and development; music reading; part singing; planning and organization; guided observations; and evaluation techniques.

Mus 333 SECONDARY METHODS 2 cr.

Includes the General Music Class, choral organizations, the changing voice, techniques of instruction, including team teaching and programmed learning, high school theory courses, high school music literature courses, scheduling, administrative problems, curriculum development, evaluation of materials and equipment, evaluative techniques, and guided observation.

Mus 334 INSTRUMENTAL METHODS 2 cr.

Treats the understandings, techniques, equipment, and materials necessary to develop an effective instrumental music program in the public schools. Demonstrations and laboratory work are designed to give the student the competencies needed to meet successfully the various teaching situations in instrumental music from the grades through the high school. Guided observations are required.

Mus 405 PIANO PEDAGOGY 2 cr.

Prerequisites: Junior Standing in Piano, and a piano major or minor.

A survey of current and significant past developments in the teaching of piano, both privately and in small and large classes. The various piano methods are analyzed, compared, criticized, and adapted to each individual's use.

Mus 406 VOICE PEDAGOGY 2 cr.

Prerequisites: A voice major or minor, and permission of the instructor.

A survey of current and past developments in the teaching of

voice, both privately and in small and large classes. The various vocal methods are analyzed, compared, criticized, and adapted to each individual's use.

Mus 407 MASTER CLASS IN ORGAN 2 cr.

Prerequisites: For organ majors only, with instructor's permission.

From time to time the organ instructor will accept from four to eight organ majors for this course. Every student observes every other student's instruction, and various techniques of teaching organ are demonstrated.

Mus 408 MARCHING BAND TECHNIQUES 2 cr.

Considers building a band show; alignment of ranks and files; development of a standard pace of 6 to 5 and 8 to 5; selection of music; instrumentation; techniques of developing morale; and the fundamentals of uniform design.

Ed 441 STUDENT TEACHING 12 cr.

The music major begins his practice teaching with observation and various simple teaching assignments, gradually assuming greater teaching responsibilities on the elementary, junior, and senior high school levels in instrumental and vocal music. A University faculty member coordinates the work of the student teacher and his school supervisor.

Ed 442 PROFESSIONAL PRACTICUM (Including School Law) 2 cr.

Significant problems of an advanced nature, and closely related to student teaching, are introduced in order to insure further professional growth. Observing of other teaching situations, reading of books and professional journals, along with reports and discussions at conferences, aid in this growth.

APPLIED MUSIC

Class Instruction

The following courses are designed to acquaint the student with basic skills in each particular area.

Mus 151	Class Voice I	1 cr.
Mus 152	Class Voice II	1 cr.
Mus 153	Class Piano I	1 cr.
Mus 154	Class Piano II	1 cr.
Mus 155	Class Strings I	1 cr.
Mus 156	Class Strings II	1 cr.
Mus 157	Class Percussion I	1 cr.
Mus 158	Class Percussion II	1 cr.
Mus 159	Class Brass I	1 cr.
Mus 160	Class Brass II	1 cr.
Mus 161	Class Woodwinds I	1 cr.
Mus 162	Class Woodwinds II	1 cr.

Mus 353	French Diction	2 cr.
Mus 354	German Diction	2 cr.

Private Instruction

Private instruction gives 2 credits for each half-hour lesson and 10 hours practice per week for one semester. The instructor determines which series apply:

100-150 Series, for Freshmen
200-250 Series, for Sophomores
300-350 Series, for Juniors
400-450 Series, for Seniors

Available in the following performance areas:

Piano	1	Clarinet	11
Organ	2	Oboe	12
Harpsichord	3	Bassoon	13
Harp	4	Saxophone	14
Voice	5	Trumpet	15
Violin	6	French Horn	16
Viola	7	Trombone	17
Cello	8	Baritone Horn	18
Base Viol	9	Tuba	19
Flute	10	Percussion	20

Ensembles

Ensembles carry no credit. The student will receive a mark of S or U.

Mus 120 Brass Ensemble
Mus 121 Chamber Ensemble
Mus 122 University Chorale
Mus 123 Concert Band
Mus 124 Glee Club
Mus 125 Marching Band
Mus 126 Opera Theater
Mus 127 Percussion Ensemble
Mus 128 University Chamber Orchestra
Mus 129 University Symphony Orchestra
Mus 130 String Ensemble
Mus 131 University Wind Ensemble
Mus 132 Women's Chorus
Mus 133 Woodwind Ensemble
Mus 134 Oratorio Chorus

THE GRADUATE SCHOOL

Indiana University of Pennsylvania offers several programs leading to graduate degrees. The primary purposes of the graduate programs are to encourage excellence in scholarship, to provide for depth in the student's special field, and to stimulate enthusiasm for continued cultural and professional growth.

Graduate credit is issued to students who have been admitted to the Graduate School and who are registered in graduate courses (those numbered 500 or above).

The graduate programs and courses are listed in the Graduate School Bulletin, which may be obtained from the Dean of the Graduate School.

THE SCHOOL OF HEALTH SERVICES

JOHN CHELLMAN, DEAN

The School of Health Services provides an opportunity to educate personnel needed in various health disciplines. The School offers professional curricula leading to appropriate baccalaureate degrees for men and women in health and physical education; inhalation therapy; medical technology; nursing; and safety. Indiana University of Pennsylvania is affiliated with approved schools and hospitals for specialized training in all programs of the allied health professions and nursing.

At present, the School of Health Services includes six Departments:

1. Allied Health Professions
2. Athletic
3. Health and Physical Education for Women
4. Health and Physical Education for Men
5. Nursing
6. Safety Sciences

ALLIED HEALTH PROFESSIONS DEPARTMENT

RICHARD M. STRAWCUTTER, CHAIRMAN; OESTERLING

INHALATION THERAPY

Inhalation Therapists assist physicians in the care of patients who have respiratory system problems or illness that relates to breathing. Their assistance includes administering gaseous drugs and executing therapeutic procedures. Included are the operation and maintenance of specialized equipment.

The program leads to the degree, Bachelor of Science in Inhalation Therapy. Presented jointly by Indiana University of Pennsylvania and the Western Pennsylvania Hospital (Pittsburgh), the program offers intensive theoretical and applied knowledge to produce high-skilled graduates who are prepared to enter the profession as therapists or instructors.

Two years of University studies, followed by 2 years of hospital studies and clinical practice, constitute the program. While at the University, students are required to complete the following courses or approved substitutes, which give a total of 64 credits:

Biology		
Biol 105	Cell Biology	4 cr.
Biol 241	General Microbiology	3 cr.
Biol 151	Physiology	3 cr.
Chemistry		
Chem 101-102	Chem I and II for Health Professions	8 cr.
English		
Eng 101, 102, 201	Eng I,II,III	10 cr.
Health and Physical Education		
*HPE	Two activity courses	2 cr.
HPE 221	Human Anatomy	3 cr.
*HPE 101	Personal and Community Health	2 cr.

*Or ROTC option

Humanities		
Phil 120	Intro to Philosophy	3 cr.
Art 101	Intro to Art	3 cr.
	or	
Eng 103	Intro to Theater	3 cr.
	or	
Mus 101	Intro to Music	3 cr.
Social Sciences		
Anth 110	Intro to Anthropology	3 cr.
Psy 201	General Psychology	3 cr.
Soc 151	Principles of Sociology	3 cr.
Hist 104	History of the U.S. and Pa. II	3 cr.
Other		
LRes 301	Audio-Visual Education (Learning Resources Dept.)	2 cr.
Math 101	Foundations of Math	3 cr.
Phys 111	Physics I	3 cr.
BM 201	Personnel Management (Business Management Dept.)	3 cr.

Course descriptions appear in this bulletin among the offerings of the individual Departments.

In addition to clinical practice each semester and research projects during the senior year, students while at the hospital are required to study the following courses: Ethics & Administration; Introduction to Inhalation Therapy; Inhalation Therapy Equipment I & II; Cardio-pulmonary Evaluation; Cardio-pulmonary Resuscitation; Nursing Arts; Pharmacology; Therapeutic Humidification; Cardio-pulmonary Pathology; Seminar in Medicine, Surgery and Obstetrics and Inhalation Therapy Pediatrics. Sixty credits are awarded for these studies.

MEDICAL TECHNOLOGY

Medical Technologists are highly skilled members of the medical care team. They perform a wide range of tests and studies, whose results aid physicians in diagnosis and treatment. The program of studies presented jointly by Indiana University and approved hospitals prepares students to enter the profession.

Upon completion of the 4-year program, the degree of Bachelor of Science in Medical Technology is granted. The

first 3 years are devoted to University studies. The University-wide General Education obligations (listed elsewhere in this Bulletin), may be varied by election of 3 to 6 credits in Humanities and 6 to 9 in Social Sciences.

Required are 16 credits in Biology, 24 credits in Chemistry, a course in Mathematics, and 2 semesters of Physics, as follows:

Mathematics		
Math 011	Elementary Functions	3 cr.
Chemistry		
Chem 211-212	Gen Chem I and II	8 cr.
Chem 231-232	Org Chem I and II	8 cr.
Chem 323	Analytical Methods	4 cr.
Chem 351	Biochemistry	4 cr.
Biology		
Biol 105	Cell Biology	4 cr.
Biol 120	Animal Biology	5 cr.
Biol 361	Microbiology	3 cr.
Biology Electives		4 cr.
Physics		
Phys 111-112	Physics I and II	6 cr.
Phys 121-122	Physics I and II Laboratory	2 cr.

NOTE:

Biology frequently elected:

Biol 281	Parasitology	3 cr.
Biol 285	Biotechniques	3 cr.
Biol 263	Genetics	3 cr.
Biol 341	General Physiology	3 cr.

Descriptions of the courses are included with the offerings of the appropriate Departments. The University portion of the program totals at least 92 credits.

Following the three academic years of University work, each student devotes 12 months to studies at an affiliate or other departmentally approved hospital School of Medical Technology to which he gains admission on a competitive basis. Indiana affiliates with selected hospital schools that give preference to applicants from affiliate colleges and universities. The university provides student counseling and maintains liaison with the hospital schools. However, since the hospital schools select and admit the students to their programs, Indiana cannot guarantee admission to hospital school studies (also known as the clinical year).

The current list of affiliate hospital schools is available from the Department of Allied Health Professions.

Semester hours of credit are earned at the hospital School of Medical Technology. In addition to integrated clinical practice, the following subjects are typically studied: Urinalysis; Hematology and Coagulation; Radio-Isotopes; Clinical Chemistry and Toxicology; Blood Bank; Histology; Cytology; Bacteriology, Parasitology and Mycology; Serology; and Virology.

Completion of college and clinical training is followed by an examination conducted by the Registry of Medical Technology of the American Society of Clinical Pathologists (ASCP). Successful passage of this examination certifies a student as an M.T. (Medical Technologist), signifying that he is a professionally qualified laboratory technologist.

ATHLETIC DEPARTMENT

HERMAN L. SLEDZIK, DIRECTOR; BECK, BETTS, BLACKSMITH, CAMPISANO, CELTNIEKS, DAVIS, HORNFECK, JOHNSON, KUNDLA, LETSO, LISCINSKY, MILL, MOORE, NEAL, PANAIA, SLONIGER, SUTTON, ZAUCHA.

DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION FOR MEN

CHARLES A. GODLASKY, CHAIRMAN; BECK, BLACKSMITH, CELTNIEKS, DAVIS, HORNFECK, JOHNSON, KAYLOR, LEPLEY, LISCINSKY, MILEFF, MILL, A. MOORE, NEAL, SLEDZIK, SLONIGER, L. R. SUTTON, TUCKER.

DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION FOR WOMEN

C. ELIZABETH McCAULIFF, CHAIRMAN; AIERSTOCK, BARTHELEMY, S. J. DAKAK, DICKIE, ECKMAN, ELLIOTT, ELTZ, KORAB, LOMMOCK, B. J. LUCAS, PODBIELSKI.

The Departments of Health and Physical Education provide dual services in the University program: (1) they provide instruction in health and various physical activities, thus serving part of the University's General Education requirement and providing leadership in a wide-ranging recreational program; and (2) they offer the degree of Bachelor of Science in Education with a major in Health and Physical Education.

These dual objectives are implemented through the conduct of the following services of the Departments of Health and Physical Education for Men and Women:

(1) Required programs of Health and Physical Education for all University students.
(2) Professional instruction leading to a baccalaureate degree in Health and Physical Education for men and women who plan careers in this specialized area or in the related health professions.
(3) Adaptive programs designed to meet exceptional physical needs of specific students and equip them to participate at maximum potential in the formal activity programs on campus.

(4) Intramural programs, consisting of a wide range of activities to meet the interests of University students.
(5) Sports clubs, clinics, and informal recreational opportunities for students, faculty, and other University personnel.
(6) Diverse programs of varsity sports, to allow exceptionally skilled students to participate in the learning situation of competitive athletics.
(7) Recreational and instructional programs meeting the interests and needs of the community of Indiana, Pennsylvania, insofar as is possible within the limitations of faculty and facilities necessary for the fulfillment of all obligations to the University community.

CURRICULA

Required Program

University students not in the ROTC program are required to complete two credits of physical education and 2 credits in HPE 101, Personal and Community Health. Any two activity courses numbered HPE 110 through 151 may be elected to fulfill the physical education requirement. (Veterans are given 4 credits towards the above requirement. Verification of service must be established.) All such courses are coeducational. In addition, a few select courses for men and women are offered.

The requirement may be altered after consultation with the Chairperson of the Health and Physical Education Departments, who will act upon the recommendation of the family physician and/or University physician and the Dean, School of Health Services.

Regulation uniforms are required for most curricular activities and may be purchased at the Memorial Field House for approximately $10.00 (men) and at Waller Gymnasium for $5.00 (women).

B. S. in Education (Health and Physical Education)

Requirements for the degree of Bachelor of Science in Education with a major in Health include the University's 52-credit General Education requirement, Professional Education requirements, and the Health and Physical Education core requirement (36 credits). Upon completion

of the degree program, the student is qualified for a Pennsylvania Provisional College Certificate in Health and Physical Education, issued by the Department of Public Instruction in Harrisburg, Pennsylvania. This certificate is valid for teaching health and physical education in any of the grades of the public schools of Pennsylvania. Major students may utilize free electives to specialize in the areas of elementary, secondary, adaptives, recreation, health, or dance.

Candidates for the degree program in Health and Physical Education must demonstrate acceptable intellectual competence and physical qualifications, as well as desirable character and personality traits. The professional program seeks to foster those qualities of individual character and competence that are inherent in personal and professional maturity. These competencies are evaluated at the end of the sophomore year. The student is either granted Advanced Standing in the Department or restricted in his scheduling of advanced courses for not less than one probationary semester. Continuance in the major program is based upon the attainment of Department Advanced Standing.

REQUIRED UNDER GENERAL EDUCATION. In meeting the University's General Education requirement, the Health and Physical Education major must include:

Natural Sciences and Mathematics.

Math 362	Probability and Statistics	3 cr.
Chem 103	Prin of Chemistry	3 cr.
Biol 103, 104	Gen Biol I and II	
	or	
Chem 111, 112	Gen Chem I and II	
	or	
Sc 105, 106	Phys Sci I and II	8 cr.

Social Sciences.

Hist 104	History of U.S. and Pa. II	3 cr.
Psy 101	General Psychology	3 cr.

Health and Physical Education 2 cr.
(HP 263 and 264, or HP 264 and 265)

Other General Education credits may be elected within the requirements described earlier.

SPECIALIZATION REQUIREMENTS. The 36 credits required for the Health and Physical Education major are listed as follows:

Prerequisite:

Biol 151	Human Physiology	3 cr.

Academic. (26 credits)

HPE 142	Intro to Health, Phys Ed and Rec	2 cr.
HPE 221	Human Anatomy	3 cr.
HPE 318	Activity Internship I	1 cr.
HPE 321	Methods in El Health and Phys Ed	3 cr.
HPE 341	Tests and Measurement in Phys Ed	2 cr.
HPE 342	Analysis of Movement	3 cr.
HPE 343	Physiology of Exercise	2 cr.
HPE 344	Adapted Phys Ed	2 cr.
HPE 346	First Aid Instructor's Course	1 cr.
HPE 404	Org and Adm of School Health Prog	3 cr.
HPE 441	Org and Adm of Phys Ed	2 cr.
HPE 442	Hist and Phil of Phys Ed	2 cr.

Methods – Activity (10 credits)

HPE 301	Tennis – Badminton	1 cr.
HPE 302	Soccer – Basketball	1 cr.
HPE 303	Bowling – Golf	1 cr.
HPE 304	Volleyball – Softball	1 cr.
HPE 305	Square Dance – Folk Dance	1 cr.
HPE 306	Field Hockey – Tumbling	1 cr.
HPE 307	Basic Rhythms – Fund of Movement	1 cr.
HPE 308	Modern Dance	1 cr.
HPE 309	Apparatus – Track and Field	1 cr.
HPE 310	Archery – Fencing	1 cr.

Electives

Courses that may be elected in addition to those required are HPE 311, 312, 314, 315, 336, 345, 405, 408, and 432.

COURSE DESCRIPTIONS

Meeting General Education Requirement

HPE 101 PERSONAL AND COMMUNITY HEALTH 2 cr.

The understanding of the scientific approach to personal health and the development of desirable attitudes and practices in all areas of personal health constitute the major part of the course. The cause, prevention, and control of various diseases are also considered.

Unless otherwise noted, the following courses provide opportunities for the learning of basic fundamentals and techniques of the activities. Specific courses may be offered in the Fall, Spring, or both Semesters.

Co-Educational General Education Activity Courses

HP 110	BEGINNING SWIMMING	1 cr.
HP 111	ARCHERY – DANCE	1 cr.
HP 112	ARCHERY – FENCING	1 cr.
HP 113	ARCHERY – SWIMMING	1 cr.
HP 114	BADMINTON – FENCING	1 cr.
HP 115	BADMINTON – SWIMMING	1 cr.
HP 116	BADMINTON – VOLLEYBALL	1 cr.
HP 117	FITNESS – SWIMMING	1 cr.
HP 118	FITNESS – VOLLEYBALL	1 cr.
HP 119	GOLF – BOWLING	1 cr.
HP 120	TENNIS – SWIMMING	1 cr.
HP 121	SWIMMING – VOLLEYBALL	1 cr.
HP 122	CONTEMPORARY (MODERN) DANCE	1 cr.
HP 123	FOLK AND SQUARE DANCE	1 cr.
HP 124	TUMBLING	1 cr.
HP 125	HORSEBACK RIDING	1 cr.
HP 126	RESISTIVE EXERCISES	1 cr.
HP 144	RHYTHMS & MOVEMENT	1 cr.
*HP 150	ADAPTED PHYSICAL EDUCATION I	1 cr.
*HP 151	ADAPTED PHYSICAL EDUCATION II	1 cr.
HP 127	VOLLEYBALL – TENNIS	1 cr.
HP 128	BADMINTON – TENNIS	1 cr.
HP 129	FENCING	1 cr.
HP 130	GOLF (SPRING)	1 cr.
HP 171	WRESTLING – SOCCER (MEN)	1 cr.
HP 172	BASKETBALL – SOFTBALL (MEN)	1 cr.
HP 161	GYMNASTICS (WOMEN)	1 cr.
HP 162	FIELD HOCKEY (FALL, WOMEN)	1 cr.

*All students who are unable to complete the 2-credit activity requirement must register for this course to obtain special class assignment or waiver of all or partial credit requirement. Such activity programs are designed for specific individuals who are medically restricted from participation in regular activities. Each program will be both therapeutic and recreational and subject to the approval of the student's personal physician.

Free Electives

The following courses may be taken by any student of the University for elective credit beyond the General Education requirement. Courses are co-educational unless specified 'men only' (M) or 'women only' (W).

HPE 245 SYNCHRONIZED SWIMMING 1 cr.

Prerequisite: Advanced Swimmer.

HPE 246 CONTEMPORARY DANCE II 1 cr.

Prerequisite: HPE 136.

HPE 260 SENIOR LIFE SAVING 1 cr.

Prerequisite: Advanced Swimmer.
Emphasizes the swimming and rescue skills necessary to complete the American Red Cross Senior Life Saving Course. Certificates are awarded upon successful completion of the course.

HPE 261 WATER SAFETY INSTRUCTOR 1 cr.

Prerequisite: HPE 260 or other proof of validated Senior Life Saving Certificate.
Emphasizes the teaching aspect of the skills, techniques and attitudes that are necessary in all areas of swimming. Students successfully completing the course are qualified to hold such positions as water front directors, aquatic directors and other similar positions.

HPE 262 SCUBA DIVING 1 cr.

Prerequisite: American Red Cross Senior Life Saving Certificate.
Designed to teach the necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment will be furnished. The student must purchase a mask, fins and snorkle (approximately $15.00). Includes theory as well as practical work.

HPE 263 AQUATICS I 1 cr.

Prerequisite: Physical Education Majors or HPE Department consent.
Basic performance techniques in swimming strokes, taught with special emphasis placed on teaching methodology.

HPE 264 AQUATICS II 1 cr.

Prerequisite: Physical Education Majors or HPE Department consent.
Swimming and rescue skills necessary to complete the American Red Cross Senior Life Saving Course. Special emphasis placed

upon a broad range of other aquatic experiences and teaching methodology.

HPE 265 AQUATICS III 1 cr.

Prerequisite: Physical Education Majors or HPE Department consent.
Advanced swimming skills, techniques and attitudes. Special emphasis placed upon a broad range of other aquatic experiences and teaching methodology.

HPE 314 ADVANCED MODERN DANCE 2 cr.

Prerequisite: Previous dance course or Department acceptance of experience.
Advanced techniques of performance and choreography. Theory and composition form an integral part of course content.

HPE 334 SPORTS OFFICIATING (M) 1 cr.

Techniques of officiating and rules interpretation. Practice in actual officiating required in several varsity sports.

HPE 336 ORGANIZATION AND ADMINISTRATION OF RECREATION 3 cr.

History, theory, and philosophy of recreation are discussed. The importance of play in the modern world, trends in recreation, problems encountered in organizing community school programs and the principles of leadership are studied.

HPE 345 CARE AND ANALYSIS OF SPORTS INJURIES 2 cr.

Prerequisite: HPE 221, Anatomy.
Prevention and care of accidents in sports activities are studied. The significance of the medical examination, conditioning exercise and sound health practices are discussed. Laboratory work includes taping, bandaging, use of physiotherapy equipment, massage and supervised training room experience.

HPE 349 DANCE REPERTOIRE I 1 cr.

Prerequisite: Department consent.
Designed to permit students to be exposed to a wide range of dance repertoire, original choreography and technique.

HPE 350 DANCE REPERTOIRE II 1 cr.

Prerequisite: HPE 349.
Designed to permit students to explore dance repertoire, choreography and technique beyond HPE 349.

HPE 405 ADMINISTRATION AND TECHNIQUES OF CAMPING 2 cr.

The growth and significance of the camp movement, and understanding of camping techniques and various types of camp programs are considered. Attention is given to all camp activity areas. Study of outdoor education also included.

HPE 407 ADVANCED SYNCHRONIZED SWIMMING 2 cr.

Prerequisite: HPE 145, Physical Education Major, or Department acceptance of experience.
Attention given to types of synchronized swimming and accompaniment, composition of performance routines and methods of training swimmers for synchronized swimming.

HPE 432 ORGANIZATION AND ADMINISTRATION OF INTRAMURAL AND INTERSCHOLASTIC PROGRAMS 1 cr.

Organization and administration of intramural activities and interscholastic programs for men and women; attention to philosophical implications for school communities at all levels.

Physical Education Majors

All courses are conducted on a co-educational basis except when noted 'Men only' (M) or 'Women only' (W).

HPE 142 INTRODUCTION TO HEALTH, PHYSICAL EDUCATION AND RECREATION 2 cr.

The historical events, scientific principles and philosophical considerations involved in the professions of health, physical education and recreation are studied.

HPE 212 TUMBLING (M) 1 cr.

Physical conditioning given to the students in the first part of the course as needed to prepare them for the stunts and tumbling activities to follow.

HPE 213 GYMNASTICS (M) 1 cr.

Prerequisite: HPE 212.
Conditioning exercises, participation in all phases of gymnastics and the coaching of the sport.

HPE 221 HUMAN ANATOMY 3 cr.

Prerequisite: Biol 103, 104.
Anatomical organization of the human body, surveyed in sufficient depth to prepare the student for physiology, kinesiology, and adaptive physical education.

HPE 231 FOOTBALL (M) 1 cr.

Fundamentals of position play, patterns of offense and defense, individual skills, and team organization in football.

HPE 233 BASKETBALL (M) 1 cr.

Team tactics, drill patterns, conditioning, rules interpretations, and teaching methods.

HPE 234 SOCCER (M) 1 cr.

Team tactics, drill patterns, conditioning, rules interpretation and teaching methods in soccer.

HPE 236 VOLLEYBALL AND INDIVIDUAL SPORTS (M) 1 cr.

Development of the basic skills and team play of each sport.

HPE 263 AQUATICS I OR HPE 264 – AQUATICS II 1 cr.

or

HPE 264 AQUATICS II OR HPE 265 – AQUATICS III 1 cr.

Prerequisite: Assignment by Department advisor.
See previous Physical Education listings.

HPE 300 RACQUET SPORTS (M) 1 cr.

All racquet sports, with emphasis on participation by the class in tennis, badminton, and paddle tennis.

HPE 301 TENNIS – BADMINTON (W) 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HPE 302 SOCCER – BASKETBALL (W) 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HPE 303 BOWLING – GOLF (W) 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HPE 304 VOLLEYBALL – SOFTBALL (W) 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HPE 305 FOLK DANCE – SQUARE DANCE 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized. The role of folk and square dance in the physical education programs of all levels is considered.

HPE 306 FIELD HOCKEY – TUMBLING (W) 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HPE 307 BASIC RHYTHMS AND FUNDAMENTALS OF MOVEMENT 1 cr.

Designed to develop an awareness of basic movement techniques through rhythmic experiences, knowledge of music notation and terminology, and methods in creative presentation.

HPE 308 MODERN DANCE (W) 1 cr.

Prerequisite: HPE 307.
A basic course in the Dance, introducing the student to technique and creative experiences in the development of dance as a creative art and an educational medium.

HPE 309 APPARATUS – TRACK AND FIELD (W) 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HPE 310 ARCHERY – FENCING (W) 1 cr.

Presentation of skill progressions and analyses, in combination with the opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HPE 318 ACTIVITY INTERNSHIP I 1 cr.

Students teach as assistants to a faculty member in two different activities in the service program. Emphasis on unit development, class management, presentation and evaluation.

HPE 321 METHODS IN ELEMENTARY HEALTH AND PHYSICAL EDUCATION 3 cr.

Study and application of theories of movement, self-testing activities, rhythms, relays, games, gymnastics suitable for the elementary school child. Observation, materials and methods of teaching and opportunities for intern teaching provided.

HPE 332 BASEBALL – RESISTIVE EXERCISE (M) 1 cr.

Basic skills, position play and team participation in baseball. Circuit training, resistive exercises, weight training and the use of weight equipment offered during the second part of the course.

HPE 335 WRESTLING (M) 1 cr.

Basic skills, moves and holds used in college and high school wrestling.

HPE 341 TESTS AND MEASUREMENTS 2 cr.

Prerequisite: Math 362.
Application of tests in physical fitness, motor ability, motor educability, sports skills, and health education. Evaluation of tests results in the health and physical education program also considered.

HPE 342 KINESIOLOGY 3 cr.

The student is taught the structural considerations of human movement and led through analyses of motor performances.

HPE 343 PHYSIOLOGY OF EXERCISE 2 cr.

Prerequisite: HPE 221 and Biol 151.
Physiological aspects of various types of exercise on the human body. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.

HPE 344 ADAPTED PHYSICAL EDUCATION 2 cr.

Prerequisite: HPE 221, 342; Biol 151.
Recognition of structural deviations is taught. Corrective exercise and physical education programs for a wide range of handicaps are studied. Psychology of handicapped persons also presented.

HPE 346 FIRST AID INSTRUCTOR'S COURSE 1 cr.

American Red Cross Standard, Advanced and Instructor's certification awarded upon successful completion of this course.

HPE 404 ORGANIZATION AND ADMINISTRATION OF THE SCHOOL HEALTH CURRICULUM 3 cr.

Prerequisite: HPE 101.
Study of the principles, methods, course content, and role of a complete school health program. Emphasis given to curriculum planning at all school levels, pupil needs, community resources and the school health services.

HPE 441 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION 2 cr.

Administrative considerations involved in the instructional, through intramural and interscholastic sports programs of all grade levels, K-12, are studied. The relationship of the physical education program to the overall school program is also presented.

HPE 442 HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION 2 cr.

Prerequisite: Senior Status.
Study of the historical and philosophical concepts of physical education, in a seminar environment. Emphasis is upon student exploration of historical, faculty, personal and peer concepts of the total physical education program.

Physical Education Major Electives

In addition to the electives open to all students at the University, the following electives are offered for major students.

HPE 311 ADVANCED FIELD HOCKEY – VOLLEYBALL (W) 2 cr.

Prerequisite: HPE 304, 306.
Advanced techniques and game strategy, with opportunities for individual skill progression. Methods and materials are presented from the aspect of coaching responsibilities in these activities.

HPE 312 ADVANCED BASKETBALL – SOFTBALL (W) 2 cr.

Prerequisite: HPE 302, 304.
Advanced techniques and game strategy, with opportunities for individual skill progression. Methods and materials are presented from the aspect of coaching responsibilities in these activities.

HPE 316 VOLLEYBALL OFFICIATING (W) 1 cr.

Prerequisite: HPE 304.
Officiating techniques and responsibilities in volleyball. Opportunities for officiating experience and qualification for professional ratings are provided.

HPE 317 BASKETBALL OFFICIATING (W) 1 cr.

Prerequisite: HPE 302.
Officiating techniques and responsibilities in basketball. Opportunities for officiating experience and qualification for professional ratings are provided.

HPE 319 ACTIVITY INTERNSHIP II 1 cr.

Prerequisites: Advanced Standing, Department approval.
Students may request a teaching/supervisory assignment in specific professional areas, such as adaptives, recreation, dance, elementary, secondary and coaching. Assignments must be approved by Department chairman.

HPE 333 PSYCHOLOGY OF SPORTS 2 cr.

Psychological theories of teaching and coaching team and individual sports.

HPE 334 SPORTS OFFICIATING (M) 1 cr.

Techniques of officiating and rules interpretation are stressed. Practice in actual officiating is required in several varsity sports.

HPE 408 GUIDED RESEARCH PROBLEM 2 cr.

The student is guided in the selection and research of a problem pertinent to his interests and those of the professions of Health, Physical Education and Recreation. Classes are held on an individual and/or seminar basis.

Required in Elementary Education

El 314 METHODS IN ELEMENTARY SCHOOL HEALTH AND PHYSICAL EDUCATION 2 cr.

Includes games, rhythms, movement education, tumbling, folk and square dancing and other skills suitable for the elementary school child. The teaching of health in the elementary school is emphasized. Methods, materials and lesson planning are a part of the course.

NURSING DEPARTMENT

MARIAN A. MURRAY, CHAIRMAN; BISS, BLACK, GOFF, HALUSKA, HART, HELTEBRAN, KATZBECK, KRESAK, SUHRIE, WRIGHT.

In collaboration with Latrobe Area Hospital, the School of Health Services offers a curriculum leading to the degree Bachelor of Science in Nursing. Upon completion of the program, the graduate is prepared to write the examination for Pennsylvania licensure as a registered nurse.

The nursing curriculum has as its primary goal the development of competent practitioners of professional nursing who are liberally educated, clinically proficient, and aware of their social responsibilities as members of the health professions. The program is designed to provide a broad background in general education, coupled with the specialized knowledge and skills required for clinical competency. Additionally, the curriculum prepares the nurse to practice within the professional code of nursing ethics, to function effectively as a member of the health-care team, and to utilize scientific principles in planning and implementing health care. The objectives of the nursing program emphasize learning of concepts of health and illness, and the provision of health care in various settings within the community.

The first two years are devoted primarily to the General Education curriculum on the main campus, with certain courses required by the Department in fulfilling this University requirement. The 20 credits outlined elsewhere in this Bulletin as mandatory in English, Humanities, Health and Physical Education (or ROTC), and Mathematics are in addition to the following:

Social Sciences (15 credits)		
Psy 201	General Psychology	3 cr.
Psy 354	Developmental Psychology	3 cr.
	S. S. electives	9 cr.
Natural Sciences and Mathematics		
Chem 101-102	Chem I and II	6 cr.
Biol 103-104	Gen Biol I and II	8 cr.
Biol 371	Vertebrate Anatomy	3 cr.
Biol 361	Microbiology	3 cr.
Biol 151	Human Physiology	3 cr.

Humanities Elective

FN 212 Nutrition 3 cr.
(Given by Food and Nutrition Department)

Clinical experiences in patient care are provided at Latrobe Area Hospital and other area health agencies during one summer session, and the junior and senior years. Men and women are eligible to enroll in the nursing program.

Registered Nurse students are enrolled in the basic baccalaureate program in nursing. They will have a genuine upper division major in Nursing, and will fulfill all degree requirements set by the University. The Registered Nurse student may be awarded advanced standing, based on prior work completed at an accredited college or university and on exemption tests.

COURSE DESCRIPTIONS

All Nursing courses are required as preparation for writing the examination for professional licensure. General education and science courses listed for freshman and sophomore years are considered prerequisites for Nursing courses.

Nurs. 300 NURSING CORE I 4 cr.

Basic concepts of health and disease, implications for care of patients with problems common to maintenance of health.

Nurs 301 FUNDAMENTALS 4 cr.

Theory and skills necessary for nursing intervention; diagnostic techniques, assessment; includes clinical practice.

Nurs 302 NURSING II 4 cr.

Concepts of health, introduction to illness and health problems, study of patients in the hospital and various other settings, emphasis on medical and surgical aspects of nursing.

Nurs 303 CLINICAL PRACTICE IN MEDICAL-SURGICAL NURSING 6 cr.

Guided experience in the care of medical-surgical patients in the hospital and clinics; identification of patient's health needs, development and implementation of nursing care plan.

Nurs 304 NURSING III 4 cr.

The human reproductive cycle from conception to menopause in females, and through adolescence in children; normal biophysical and psychosocial growth and development; common abnormalities.

Nurs 305 CLINICAL PRACTICE IN MATERNAL — CHILD NURSING 4 cr.

Guided clinical practice in obstetric and pediatric nursing; exposure to the family in home, clinic, hospital.

Nurs 321 JUNIOR SEMINAR I 3 cr.

Techniques of interviewing, verbal and nonverbal communication, interpersonal relationships; leadership, management.

Nurs 322 NURSING CORE II 3 cr.

Basic pathophysiological concepts of health and disease; broad theoretical foundation for the nursing process.

Nurs 323 NURSING CORE III 3 cr.

Continuation of concepts of pathophysiology introduced in Nursing Core II.

Nurs 324 JUNIOR SEMINAR II 3 cr.

Survey of the teaching-learning process as related to clinical nursing; study of the provision of health teaching.

Nurs 402 NURSING IV 4 cr.

Concepts of emotional health and illness, psychiatric theory.

Nurs 403 CLINICAL PRACTICE IN PSYCHIATRIC NURSING 4 cr.

Guided experience in the care of patients with psychiatric illnesses in home, clinic, hospital and community agencies.

Nurs 404 NURSING V 3 cr.

Advanced theory in medical and surgical nursing; guided clinical experience.

Nurs 405 NURSING VI 4 cr.

Study of multiple health problems, public health facilities, health care on a community level.

Nurs 406 CLINICAL PRACTICE IN COMMUNITY NURSING 4 cr.

Guided clinical experience in caring for patients, particularly in the home, clinic or other public health facility.

Nurs 424 SEMINAR IN MEDICAL-SURGICAL NURSING 3 cr.

Study of organization of patient care, the team nursing concept; the role of other disciplines in illness and in health care; advanced clinical concepts.

Nurs 425 SEMINAR IN NURSING 3 cr.

Study of trends in nursing practice, survey of the nursing profession, pro-professional adjustments, philosophy of nursing.

Nurs 426, 427 INDEPENDENT STUDY Varied credits

Internships, individual projects, faculty-supervised study focused on individual student interest.

Nurs 430 RESEARCH PROBLEMS 3 cr.

Development of a research study related to patient care; writing research paper.

SAFETY SCIENCES DEPARTMENT

ROBERT J. FIRENZE, CHAIRMAN; LEE, McCLAY

The Department offers the degree of Bachelor of Science in Safety Management (occupational safety and health) and a certification program in driver education.

CURRICULA

B. S. in Safety Management

The degree in Safety Management qualifies the student for professional, administrative, managerial, and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, contract construction, trade service industry and many others. There is an acute need in Pennsylvania and in the nation for the university educated occupational safety and health professional. The curriculum includes a major of 36 credits in Safety Sciences and a minor of 18 credits in Business Management. In addition, a number of elective courses are available in the major and minor fields that will enable the student to strengthen his primary interest areas.

REQUIRED UNDER GENERAL EDUCATION. In meeting the University's General Education requirement, the Safety Sciences major must include:

Chem 111, 112	Gen Chem I and II	8 cr.
Psy 201	General Psychology	3 cr.

SAFETY SCIENCES MAJOR. The 36 credits required for a major in Safety Sciences must be obtained by means of the following courses: SafS 101, 111, 211, 301, 302, 311, 345, 412, 422, 431 and 445.

BUSINESS MANAGEMENT MINOR. The following courses are required for the minor in Business Management.

Bus 101	Bus Org and Mgt	3 cr.
Bus 321	Bus Communications	3 cr.
Bus 339	Bus Data Processing	3 cr.
BM 111	Found of Math (Mgt)	3 cr.
BM 201	Personnel Management	3 cr.
BM 241	Finance	3 cr.

Certification in Driver Education

The State Council of Education approved this certification in January of 1948. The program is administered by the Safety Sciences Department. Of the five courses applicable (SafS 251, 252, 253, 254, and 255), the student must take any four in order to meet the requirements for certification of 12 credits. A temporary standard certificate is issued upon the completion of these courses and it becomes permanent after two years of successful experience in the field.

In order to receive certification in Driver Education, the student must include Education for "Safe Living" on his application for teaching certification prior to graduation. Students who have already graduated should contact the office of the Dean, School of Health Services for the correct procedure.

COURSE DESCRIPTIONS

SafS 101 INTRODUCTION TO OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT 3 cr.

Covers the theory and logic of industrial hazard control, the effects of hazards and failures on organizational control and productivity, safety and health legislation, accident causation, organization and administration of safety and health programs, aspects of recognizing, evaluating, and understanding the control of safety and health hazards, acquiring hazard data, hazard analytical tools, human factors considerations, communication techniques in safety and health management, measuring the effectiveness of hazard control practices, and the role of interfacing management systems in hazard control.

SafS 111 & 211 INDUSTRIAL SAFETY ENGINEERING I & II 3 cr. each

Understanding the complexity of the industrial hazard control problem by thoroughly examining the elements of safety and health enumerated in the OSHAct promulgated standards is stressed. Emphasis is given to plant layout and design, materials handling, machine guarding, walking and working surfaces, hazardous materials and combustible liquids, industrial sanitation and environmental controls, compressed gases and cryogenics, electrical and static electricity hazards, boilers and unfired pressure vessels, and protective equipment.

SafS 301 & 302 INDUSTRIAL HYGIENE I & II 3 cr. each

Introduces the concepts of occupational health as they pertain to appraising and controlling environmental health hazards. Includes a study of occupational diseases, chemical, biological, and physical agents that produce organic or systemic damage to the human organism, problems in toxicology (including the derivation and use of threshold limit values), evaluating health hazards (including sources of air contaminants and physical agents and

effectiveness of control measures), methods of collecting atmospheric samples, methods of controlling harmful environmental factors or stresses, use of analytical instruments to measure industrial contaminants, industrial hygiene aspects of radiant energy (including ultraviolet, visible light, infra-red, micro-wave, ultra-sonics, lasers, ionizing radiation, and heat), industrial noise, evaluation of thermal stress, industrial ventilation, personal protective equipment, and air pollution control.

SafS 311 FIRE PROTECTION ENGINEERING 3 cr.

Emphasizes the basic theories on fire and fire behavior, common fire hazards, fire codes and regulations, structural effects of occupancies on fire spread, fire detection and alarm systems, design, selection, and placement of fixed and portable fire extinguishing systems, principles of fire attack planning and training, fire prevention and inspection methods.

SafS 345 SYSTEMS SAFETY ANALYSIS 3 cr.

Takes the approach of systems analysis in accident prevention, economics of system safety, information acquisition, analytical approaches, systems safety methodology, mathematics of systems analysis (including statistical methods, boolean algebra, and testing and reliability), comparison of various analytical methods in the engineering design, inductive and deductive analytical techniques (including preliminary hazard study), FAULT HAZARD ANALYSIS, FAILURE MODE AND EFFECT ANALYSIS, FAULT TREE ANALYSIS, and exercises in the application of FAULT TREE ANALYSIS to hardware and man/machine systems.

SafS 412 MEASURING SAFETY AND HEALTH PROGRAM EFFECTIVENESS 3 cr.

Teaches the reasons and importance for evaluating safety and health innovations on organization performance, devising measuring systems capable of extracting accurate, meaningful data, methods of collecting, codifying, and processing accident-injury information, and utilization of data retrieval systems.

SafS 422 RADIOLOGICAL HEALTH 3 cr.

Study of problems associated with ionizing radiation in the human environment. Emphasis given to biological effects, radiation measurement, dose computational techniques, exposure control, and local and federal regulations. Study and use of various radiological instruments included.

SafS 431 INTERNSHIP 6 cr.

All Safety Management majors are required to take and pass this course. It will be conducted away from the University at various industrial enterprises. Intended to allow the student to apply hazard assessment and safety management practices to actual industrial situations while at the same time being exposed to the complexities of the industrial environment. The student will spend 10 hours per week at an industrial location and 2 hours of classroom instruction weekly where his field assignments will be

designated, his problems will be discussed, and his progress will be evaluated.

SafS 445 PRODUCT SAFETY 3 cr.

Prerequisite: SafS 345.
Traces the flow of applicable legislation dealing with consumerism and product safety. Corporate liability for product safety is emphasized through case studies. The student is familiarized with the evolving role of the Federal Bureau of Product Safety. Corporate planning for product development and safety is detailed with emphasis on systems safety analysis, standards and product testing.

Driver Education

SafS 251 INTRODUCTION TO DRIVER SAFETY EDUCATION 3 cr.

Concerned with recognition of unsafe conditions and practices and the methods by which they may be eliminated or curtailed. Gives an overall view of safety problems in the home, school, highway, public places, and the work environment.

SafS 252 DRIVER EDUCATION 3 cr.

Prerequisite: HPE 251.
The student should have driving ability above the average and evidence of holding a driver's license, plus at least 2 years' driving experience without a major accident for which the driver is responsible. Course is a combination of class instruction in traffic safety and driver training in actual behind-the-wheel practice in a dual-control car. It prepares the student to teach driver education in a high school. Three hours lecture, 2 hours laboratory per week.

SafS 253 METHODS AND MATERIALS FOR DRIVER SAFETY EDUCATION IN THE SECONDARY SCHOOLS 3 cr.

Prerequisites: HPE 251, 252.
Emphasizes the use of correlation and integrating safety with many different subjects and school activities, teaching as a separate subject and centering safety education around pupil organization and special projects.

SafS 254 ORGANIZATION AND ADMINISTRATION OF DRIVER SAFETY EDUCATION 3 cr.

Prerequisites: HPE 251, 252.
Emphasizes the basic principles of organizing, administering and supervising safety education procedure in the public schools at all grade levels. Encouraging student activities in the school and community is a part of the course.

SafS 255 PSYCHOLOGY OF VEHICLE ACCIDENT PREVENTION 3 cr.

Application of the principles of psychology to the development of safe behavior in the school, home, community, highway, and industry. The cause of accidents in relation to attitudes, habits, and behavior.

THE SCHOOL OF HOME ECONOMICS

KATHLEEN JONES, DEAN

The School of Home Economics has two main objectives: (1) to aid students in the development of professional competencies and skills necessary for careers in the many fields related to home and family life, and (2) to assist in preparing students to lead useful lives as individuals, family members, and citizens in a democracy. The Curricula in the School contribute to the development of professional competencies which enable the students to enter a diversity of careers in education, business, and community services.

Courses are offered in the five subject-matter areas of clothing and textiles, foods and nutrition, housing and home furnishings, family economics and home management, and human development and the family by the three departments of the School: Consumer Services, Food and Nutrition, and Home Economics Education.

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

Students enrolled in the School of Home Economics must meet the University requirements in General Education. (The School requires that the Natural Sciences requirement be met by the following):

Chem 101-102	Chem for Home Economics and Health Professions	8 cr.

Mathematics (see major Department requirement)		
Biol. 151	Human Physiology	3 cr.
*Biol. 241	Microbiology	3 cr.

*Students electing the Textiles, Clothing, Interior Design concentration in the Consumer Services Department may replace Biology 151 and 241 with a Humanities elective.

In meeting the Social Science requirements, all students in the School must take Psychology 101, General Psychology. Students in the Food and Nutrition and Home Economics Education Departments must elect History 104, History of the United States and Pennsylvania II. All students in the School are encouraged to elect general education courses in art, sociology, economics and anthropology.

SCHOOL REQUIREMENTS

In addition, all students enrolled in the School are required to take the following courses in home economics.

HO 218	Child development	3 cr.
HO 411	Family Relations	3 cr.
CS 315	Family Finance and Consumer Economics	3 cr.

HOME ECONOMICS EDUCATION DEPARTMENT

RUTH BROWNING, INTERIM CHAIRMAN; ANDERSON, BELL, FERNANDEZ, GALLATI, GROSS, HOVIS, KAZMER, LIU, LUCAS, RUPERT, SHEARER.

If you enjoy working with people of various age levels and incomes, a number of opportunities await you in Home Economics Education.

The program of studies leads to a Bachelor of Science in Education with a Home Economics major and meets certification requirements for teaching home economics at all levels (K-Adults) in the schools of Pennsylvania.

This program also prepares one for varied types of employment related to improving family life such as home economists with: state extension services, utility companies, social service organizations and government agencies.

In addition to University and School requirements, the student is required to complete the following home economics content and professional education courses.

Home Economics Content Requirements

CS 112	Clothing Construction and Fitting	3 cr.
CS 113	Management and Equipment	3 cr.
CS 214	Apparel Structure and Design	3 cr.
CS 216	Clothing and Man	3 cr.
CS 217	Interior Design	3 cr.
CS 314	Textiles	3 cr.
CS 414	Home Management Residence	3 cr.
FN 111	Introduction to Foods	3 cr.
FN 211	Advanced Foods	3 cr.
FN 212	Nutrition	3 cr.
HE 213	Principles of Design (See under Special Courses in Art Department)	2 cr.
HO 412	Nursery School	3 cr.
	Elective in any Home Economics Area	3 cr.

Professional Education Requirements

HO 250	Introduction to Teaching Vocational Home Economics	3 cr.

HO 350	Methods of Teaching and School Law in Vocational Home Economics Education	3 cr.
Psy 302	Education Psychology	3 cr.
LRes 301	Audio-Visual Education	2 cr.
FdEd 302	History and Philosophy of American Education	3 cr.
Ed 431	Student Teaching (for Home Economics)	8 cr.

COURSE DESCRIPTIONS

HO 218 CHILD DEVELOPMENT 3 cr.

Prerequisite: Psy 101.
Focuses on helping students develop an understanding of the normal development and behavior of children. Survey is made of the physical, emotional, social, and intellectual development of children in the family from conception through early adolescence. Pertinent research in child development is analyzed. Three hours lecture per week.

HO 250 INTRODUCTION TO TEACHING VOCATIONAL HOME ECONOMICS 3 cr.

Prerequisite: Psy 101.
Emphasis on the study of students, schools and communities, the selection, use and evaluation of techniques for effective teaching situations through lecture, discussion and planned observations in schools. Three hours lecture per week.

HO 350 METHODS OF TEACHING AND SCHOOL LAW IN VOCATIONAL HOME ECONOMICS EDUCATION 3 cr.

Prerequisites: Ed Psy 302, HO 250.
Provides students the opportunity to plan home economics curricula in relation to the needs and interests of students and their families within the school community. Students become orientated to classroom experiences, activities and responsibilities through planned observations. Two hours lecture, 2 hours laboratory per week.

HO 363 THE FAMILY AND THE COMMUNITY 3 cr.

Intensive study of community contributions and problems that affect the family, as well as the contributions of families to the community. Group dynamics, media of communication, and other experiences that aid understanding of human behaviors is investigated. Field work is an integral part of the course. Three hours lecture per week.

HO 411 FAMILY RELATIONS 3 cr.

Prerequisites: Psy 101, HO 218 (Majors).
Focuses on preparation for marriage and the study of human relations principles basic to marital adjustment. Influence of community and family experiences on personal development and adjustment are studied. Three hours lecture per week.

HO 412 NURSERY SCHOOL 3 cr.

Prerequisites: Ed Psy 302, HO 218. (Open to Home Economics Education Majors or by special permission of Department Chairman.)
Techniques for planning and managing a group of pre-school children are emphasized. Experiences useful for teaching in Home Economics Child Development Laboratories in Secondary School are provided through the application of principles of child guidance and development and by student participation in the nursery school as a teacher assistant. Two hours lecture, 6 hours laboratory per week for one quarter.

HO 421 PRE-SCHOOL EDUCATION, AGES 2–5 YEARS 3 cr.

Prerequisite: HO 412.
Intensive observation and participation in the Nursery School are used as the basis for understanding teaching procedures appropriate for pre-school children. Three hours lecture per week.

HO 422 EARLY CHILDHOOD EDUCATION 3 cr.

Prerequisites: Psy 101, HO 218.
Current educational theories and research are reviewed in terms of their implication for the pre-school and their effects on material, equipment, and activity selection. Three hours lecture per week.

HO 423 MARRIAGE AND FAMILY RELATIONS 3 cr.

Prerequisites: HO 411.
Emphasizes the development of an understanding of interpersonal relations within the family. Potential problems of marriage are identified and investigated in terms of the development of an understanding of what constitutes good adjustment. Three hours lecture per week.

HO 424 THE FAMILY 3 cr.

Prerequisites: HO 411.
Concentrated study of selected areas of family life, with emphasis on the dynamics of family interaction and interpersonal relationships. Three hours lecture per week.

HO 425 STUDY TOUR IN FAMILY LIFE 2-6 cr.

Offers the opportunity to observe the family social structure and values in relation to cultural background and economic conditions. Culture, class and ethnic variations in family and kinship systems are examined, emphasizing the relationship to international relations and family life education.

HO 451 WORKSHOP IN HOME ECONOMICS EDUCATION 3 cr.

Prerequisites: Course in Methods of Teaching.
Individual and group projects related to current trends, issues or problems are developed. Current curriculum trends are identified and evaluated. Two hours lecture, 2 hours laboratory per week.

HO 452 VOCATIONAL HOME ECONOMICS EDUCATION CURRICULUM CONSTRUCTION 3 cr.

Curriculum construction for consumer and homemaking education and gainful home economics programs and current vocational legislation as it relates to home economics education is emphasized. Three hours lecture per week.

HO 453 MATERIALS AND METHODS OF TEACHING IN HOME ECONOMICS 3 cr.

Innovative instructional and curriculum materials, techniques for teaching and learning will be investigated in relation to the philosophy and conceptual framework of home economics education. Three hours lecture per week.

HO 454 HOME ECONOMICS EDUCATION FOR ADULTS 3 cr.

Prerequisites: A course in Methods of Teaching in Home Economics, Psy 101.

Overview of the field of adult education, agencies, programs, processes and methods. Theories of adult learning methods and processes of adult education are identified and applied in programming and evaluating adult classes in home economics education. Three hours lecture per week.

ED 431 STUDENT TEACHING (FOR HOME ECONOMICS) 8 cr.

Prerequisites: HO 350.

Supervised opportunities are provided to guide the efforts of students in the home economics classroom. Self evaluation and analysis of personal and professional growth are emphasized. Attendance at Saturday seminars is required. This course meets for one Quarter.

CONSUMER SERVICES DEPARTMENT

DONNA STREIFTHAU, CHAIRMAN; CRAMER, LYNN, PURCELL, SHARMA, SHPARGEL, SOMMERS, WOODS

Curricula in this Department lead to a wide variety of employment opportunities for both men and women where home economics knowledge and skills are of value. Home economists are employed to serve consumers by businesses and governmental agencies. Specific programs have objectives related to preparing for particular types of careers.

Courses offered by the Department of Consumer Services focus on man's physical environment and resources, including his personal interaction with this environment. The management of his resources, the housing in which he lives, the home furnishings and equipment surrounding him, the clothes he wears, and the beauty in his environment are all matters of fundamental concern. The School of Home Economics subject matter courses offered by this Department include those in the areas of clothing and textiles, housing and home furnishings, and family economics and home management.

The Department offers the degree of Bachelor of Science in Home Economics with two options: Business and Community Service. In addition to these options, specific programs may be planned to meet particular career goals of individual students. An adviser helps each student plan a program to fit his professional objectives.

Course requirements for the degree include 52 credits in General Education, required by the University, 36 credits in Home Economics courses, 18 credits in a concentration of courses outside the School of Home Economics related to the student's career goal, and 18 credits in supporting electives. Students in the Business option should take Bus. 111 to meet the General requirement for mathematics.

Department Requirements

In addition to meeting the University and School requirements, all students in the Department must take the following three courses:

CS 113	Management and Equipment	3 cr.

CS 421	Consumer Services Practicum	3 cr.
HE 213	Principles of Design	2 cr.
	(See under Special Courses in Art Department)	

Home Economics in Business Option

Students selecting this option may concentrate their home economics courses in the areas of (1) textiles, clothing, interior design, or (2) foods, nutrition, and equipment, or (3) they may choose a variety of courses from all subject matter areas of home economics. Graduates may be employed by business organizations producing foods, clothing, textiles, home furnishings or related products, or by a department store or utility company.

Textiles, Clothing, Interior Design Concentration

Required:

CS 112	Clothing Construction and Fitting	3 cr.
CS 216	Clothing and Man	3 cr.
CS 217	Interior Design	3 cr.
CS 314	Textiles	3 cr.
CS 318	Fashion Analysis	3 cr.

Minimum of 4 Credits From the Following:

CS 214	Apparel Structure and Design	3 cr.
CS 312	Housing and Man	3 cr.
CS 356	Historic Costume	3 cr.
CS 357	Interior Design Studio	3 cr.
CS 405	European Study Tour in Clothing and Textiles	2-6 cr.
CS 417	Tailoring	3 cr.

Foods, Nutrition, Equipment Concentration

Required:

FN 111	Introduction to Foods	3 cr.
FN 211	Advanced Foods	3 cr.
FN 212	Nutrition	3 cr.
FN 357	Special Problems in Foods	3 cr.
FN 362	Experimental Foods	3 cr.

Minimum of 6 Credits From the Following:

FN 214	Man and Food	3 cr.
FN 313	Quantity Food Service Management	4 cr.
FN 355	Diet Therapy	3 cr.
FN 405	European Study Tour in Foods	
	or	
FN 408	Oriental Study Tour in Foods	2-6 cr.

CS 217	Interior Design	3 cr.
CS 312	Housing and Man	3 cr.

Outside Concentration

A minimum of 18 credits is required from the following, or approved Business substitutes:

Bus 101	Business Organization & Mgt.	3 cr.
*Bus 111	Foundations of Math	3 cr.
BM 201	Personnel Management	3 cr.
Bus 221	Accounting I	4 cr.
Bus 233	Marketing	3 cr.
Bus 251	Intermediate Accounting	3 cr.
Bus 332	Retail Management	3 cr.
Bus 333	Principles of Selling	3 cr.
Bus 339	Business Data Processing	3 cr.
BM 434	Advertising	3 cr.

Additional Requirements:

Econ 121	Principles of Econ I	3 cr.
Econ 122	Principles of Econ II	3 cr.

*May be taken as a General Education requirement, instead of a Business requirement.

Home Economics in Community Services Option

Courses from all subject matter areas of home economics are included in this option. Electives may be concentrated in particular home economics areas. A concentration of courses is elected in a field of study outside home economics, such as sociology. Graduates may be employed by the Extension service or by various governmental and welfare agencies.

Required:

FN 111	Introduction to Foods	3 cr.
FN 212	Nutrition	3 cr.
CS 112	Clothing Construction and Fitting	3 cr.
CS 216	Clothing and Man	3 cr.
CS 217	Interior Design	3 cr.
CS 314	Textiles	3 cr.
CS 414	Home Management	3 cr.

A minimum of 18 credits beyond General Education courses are to be selected in a field of concentration such as Sociology.

COURSE DESCRIPTIONS

CS 112 CLOTHING CONSTRUCTION AND FITTING 3 cr.

Principles and techniques of fitting and construction of clothing

are applied and analyzed through directed garment projects. Exemption by submitting examples of work and passing exam. Exempt students take CS 214. Six lecture-laboratory hours per week.

CS 113 MANAGEMENT AND EQUIPMENT 3 cr.

Problems of the consumer concerned with the selection, use, and care of equipment for the home are investigated. Management and decision making processes relative to the administration of a home are studied. Two 1-hour lectures, one 2-hour laboratory per week.

CS 214 APPAREL STRUCTURE AND DESIGN 3 cr.

Prerequisite: CS 112.
Garment design achieved by use of flat pattern techniques. An understanding is developed of the interrelationship of garment design, fabric, fit, and construction processes. Two 1-hour lectures, two 2-hour laboratories per week.

CS 216 CLOTHING AND MAN 3 cr.

Prerequisite: Psy 101.
Cultural, social, psychological, aesthetic, functional, economic and technological factors as they interact to determine the meaning and use of clothing for the individual and society. Two 1-hour lectures, one 2-hour laboratory per week.

CS 217 INTERIOR DESIGN 3 cr.

Prerequisite: HE 213 or equivalent.
Emphasis is upon the development of knowledgeable consumers in the selection and design of a home, its furnishings, and its total environment. Two 1-hour lectures, one 2-hour laboratory per week.

CS 312 HOUSING AND MAN 3 cr.

Managerial, sociological, economic, and asethetic aspects of housing man are investigated as well as a consideration of the environment of the home as part of the community. Three hours lecture per week.

CS 314 TEXTILES 3 cr.

Prerequisite: Chem 102.
Interpretation of basic textile knowledge with emphasis on fiber, yarn, fabric structures and fabric finishes. Discussions include the importance of factors related to consumer information, protection, and satisfaction. Two 1-hour lectures, one 2-hour laboratory per week.

CS 315 FAMILY FINANCE AND CONSUMER ECONOMICS 3 cr.

Economic, sociological, and psychological principles are applied to family money management problems. Sources of consumer aid and protection are investigated. Three hours lecture per week.

CS 318 FASHION ANALYSIS 3 cr.

Prerequisite: CS 216.
A study of fashion as a social force and its economic impact; an

investigation of aspects of fashion merchandise used by various groups of consumers for apparel and for furnishing the home. Three hours lecture per week.

CS 354 SPECIAL PROBLEMS IN CLOTHING 3 cr.
Particular consumer considerations in the selection of apparel are investigated. Three hours lecture per week.

CS 356 HISTORIC COSTUME 3 cr.
Chronological study of historic costume from ancient times to the present day, emphasizing style details as well as social, economic, political, religious, and aesthetic influences on design of clothing worn. Three hours lecture per week.

CS 357 INTERIOR DESIGN STUDIO 3 cr.
Prerequisite: CS 217.
Creative solutions to problems in interior environments are emphasized. Field trips to museums, furniture factories, stores and private residences are included. One hour lecture, 4 laboratory hours per week.

CS 405 EUROPEAN STUDY TOUR IN CLOTHING AND TEXTILES 2-6 cr.
Opportunity is provided to visit establishments concerned with the production and distribution of textiles and apparel and to view historic costumes and textiles, including some of the world-famous tapestries. Both traditional and modern methods of textile production are observed.

CS 413 CONSUMER ECONOMICS 3 cr.
Prerequisite: CS 315.
Problems in consumer expenditures are studied with emphasis given to affects of current economic and social forces. Individual investigations are required. Three hours lecture per week.

CS 414 HOME MANAGEMENT (RESIDENT HOUSE) 3 cr.
Decision-making and cooperation in group living is stressed. Students plan, prepare and serve nutritious meals; use and care for equipment and furnishings; and provide for individual and group needs. Three class hours plus residence for one quarter.

CS 416 PROBLEMS IN FAMILY FINANCE 3 cr.
Prerequisite: CS 315.
More advanced problems in personal and family finance are studied. Two hours lecture per week.

CS 417 TAILORING 3 cr.
Prerequisite: CS 112.
Various tailoring methods are studied and applied in the selection, fitting and construction of a tailored garment. Consumer problems in the selection of ready-to-wear apparel are investigated. Six lecture-laboratory hours per week.

CS 421 CONSUMER SERVICES PRACTICUM 3 cr.
Opportunity for practical application of learnings through presenting professional information by means of a variety of media and techniques, orientation to the role of the professional home economist. Four hours per week.

FOOD AND NUTRITION DEPARTMENT

ALLEN M. WOODS, CHAIRMAN; BERTHY, CESSNA, COLUCCI, GRESSLEY, SCHAUM, SIMKINS.

Interesting work, excellent salaries and opportunity for advancement in positions that give meaning, satisfaction and a purpose in life await young men and women who prepare for careers in the growing field of dietetics, food service management, and educational food services.

Courses offered by the Food and Nutrition Department are planned to train the student as a professional to meet the challenge of this mushrooming industry, which includes not only the commercial food service and hospitality facets of the industry, but hospital and educational segments as well.

The prime requisites for success in the field of foods and nutrition are an interest in people, an artistic appreciation of quality food, a realization of the need for good nutrition, and a knowledge of sound business principles.

In addition to University and School requirements, department course requirements which lead to the Bachelor of Science degree and certification from the Pennsylvania Department of Education as a Nutrition Program Specialist include the following:

Business Requirements:

BE 111	Foundations of Math	3 cr.
Bus 360	Accounting for Food Service	3 cr.

Professional Education Requirements:

Ed 422	School Law	1 cr.
Ed Psy 302	Educational Psychology	3 cr.
LRes 301	Audio-Visual Education	2 cr.
Fd Ed 302	History and Philosophy of American Education	3 cr.
FN 364	Methods of Teaching	3 cr.
FN 361	Student Teaching & Management Experience	6 cr.

Food and Nutrition Content Requirement:

FN 111	Introduction to Foods	3 cr.

FN 201	Personnel Management	3 cr.
FN 211	Advanced Foods	3 cr.
FN 212	Nutrition	3 cr.
FN 313	Quantity Food Service & Management	4 cr.
FN 321	Professional Employment Practicum	0 cr.
FN 356	Food Service Administration	3 cr.
FN 358	Food Service Equipment and Layout	3 cr.
FN 359	Quantity Food Purchasing	3 cr.
FN 362	Experimental Foods	3 cr.
FN 402	Nutrition & Community Health	2 cr.
American Dietetic Association*		
Chem 355	Biochemistry & Nutrition	3 cr.
FN 355	Diet Therapy	3 cr.

*Replaced by electives if student does not plan an internship.

COURSE DESCRIPTIONS

FN 111 INTRODUCTION TO FOODS 3 cr.

Basic principles of food preparation, including use of equipment, menu planning, marketing and table service for family meals are investigated and studied. Two hours lecture, 2 hours laboratory work and/or demonstration per week.

FN 201 PERSONNEL MANAGEMENT 3 cr.

Fundamental principles involved in maintaining harmonious human relations at all levels of a business enterprise are studied. Course specifically designed for majors in the Food and Nutrition Department.

FN 211 ADVANCED FOODS 3 cr.

Prerequisites: FN 111, Chem 102, concurrently.
In-depth study of food preparation, including food preservation, protein, carbohydrate and fat cookery. Two hours lecture, 4 hours laboratory per week.

FN 212 NUTRITION 3 cr.

Prerequisites: Chem 102; Biol 151 or concurrently.
Sources and functions of nutrients and the interdependence of dietary essentials and nutritive value of an optimum diet are studied. Attention is given to varied conditions in human life.

FN 214 MAN AND FOOD 3 cr.

Prerequisites: Psy 101 or Soc 151 or Anthro 110.
Exploration of the economic, biological, psychological, social and aesthetic significance of food for individuals, families and society. Especially recommended for non-majors, but is offered as an elective for majors in the School of Home Economics.

FN 313 QUANTITY FOOD SERVICE AND MANAGEMENT 4 cr.

Prerequisites: FN 211 and 212.
Basic course in quantity food production, with experience including planning, purchasing, preparing and serving nutritionally adequate lunches. The menu requirements of the National School Lunch Program are emphasized in satellite and on-premise feeding.

FN 321 PROFESSIONAL EMPLOYMENT PRACTICUM 0 cr.

Prerequisites: FN 313 plus 60 credits.
Junior or sophomore summer is used for an employment experience in an approved food service facility. Students seek their own position. Assistance and guidance given by Department chairman.

FN 351 NUTRITION EDUCATION 3 cr.

Study of the functional knowledge of nutritional concepts for helping teachers guide students and others through varied experiences directed toward improved food habits and nutritional health.

FN 352 NUTRITION AND THE PRE-SCHOOL CHILD 3 cr.

Nutritional needs of pre-school children are studied from the biological standpoint. The influences of social, economic and ethnic background in establishing dietary habits are analyzed. Course designed for students without a chemistry background.

FN 355 DIET THERAPY 3 cr.

Prerequisites: FN 212; Chem 102; Biol 151.
Modification of the normal adequate diet to meet the nutritional needs of problems in pathological conditions requiring special dietary treatment. Advanced nutrition study.

FN 356 FOOD SERVICE ADMINISTRATION 3 cr.

Prerequisites: Psy 101, FN 313, 201; and Bus 360.
Organization and administration of the food service business, including personnel policies, work simplification, cost controls, supervision and sanitation.

FN 357 SPECIAL PROBLEMS IN FOODS 3 cr.

Prerequisite: FN 211.
Individual problems in foods are investigated, with emphasis on identified weaknesses in the student's knowledge of food.

FN 358 FOOD SERVICE EQUIPMENT AND LAYOUT 3 cr.

Prerequisite: FN 313.
Emphasis upon the selection and layout of food service equipment in relation to production and work flow. Field trips permit investigation of a variety of layouts.

FN 359 QUANTITY FOOD PURCHASING 3 cr.

Prerequisite: FN 313, or concurrently.
Course discusses sources, standards of quality, grades, methods of purchase and storage of various foods. Emphasis is given to the development of purchasing policies and procedures.

FN 361 STUDENT TEACHING AND MANAGEMENT EXPERIENCE 6 cr.

Prerequisites: FN 313, 358, 364, and Bus 360.
This is a guided experience under the supervision of a certified school food service director. Students gain practical experience in management and other aspects of a school food service operation and classroom experience in teaching of foods and/or nutrition.

FN 362 EXPERIMENTAL FOODS 3 cr.

Prerequisites: FN 211 and 212; Chem 102.
Study of foods based on scientific methods wherein physical and chemical principles are observed. Students are taught professional demonstration techniques.

FN 364 METHODS OF TEACHING 3 cr.

Current teaching techniques and resource materials in nutrition education are emphasized. Both classroom teaching and on-the-job training programs are investigated and practiced.

FN 401 FOOD MANAGEMENT COST CONTROLS 3 cr.

Food, beverage and labor cost controls for restaurants, school lunch programs and health care feeding facilities are studied. This course explores relationship between budgetary information and managerial decision making in large food service operations.

FN 402 NUTRITION AND COMMUNITY HEALTH 3 cr.

Prerequisite: FN 212.
Nutritional implications of both good and poor nutrition of all age groups in a practical home and community situation are studied. Corrective and preventive methods are emphasized.

FN 406 EDUCATION STUDY TOUR IN FOODS 2-6 cr.

Comprehensive program of directed activities permits first hand knowledge of growing, processing, marketing and preparation of foods. The historical and cultural aspects of food is studied. Visits to food markets, catering schools, research centers, famous restaurants, etc., is included.

ADDENDUM:

All lab courses where food is prepared require white uniforms, including white shoes. Students must meet the professional dress requirements of the Department.

MILITARY SCIENCE

COLONEL JOHN P. BURKE, CHAIRMAN; LTC WEAVER, MAJ. CLARK, MAJ. McCOID, CPT. SAGER, CPT. GILBERT, SGM DALE, SGM SCHAFER, MSG POWELL, SSG PARKER.

Indiana University of Pennsylvania, Indiana, Pennsylvania, is authorized a Senior Division, Reserve Officers Training Corps unit. The Senior Division ROTC program offers to the student the opportunity to prepare for the highest service of citizenship; it offers the right to contribute towards the preservation of the freedoms that U.S. citizenship offers. It is from the knowledge that one is preparing to take his place as a defender of American liberty, in the ranks that have enrolled countless citizen soldiers before him, that comes the greatest reward and meaning of ROTC and Reserve Officer Service.

REQUIREMENTS FOR ENROLLMENT

The general requirements for enrollment in the ROTC are that the student be a citizen of the United States, physically qualified as prescribed by the Department of the Army, accepted by the institution as a regularly enrolled student, not less than 14 years of age, but less than 24 years of age at the time of enrollment in the basic course. For continuance in the ROTC, the student must successfully complete such general survey or screening tests as are given to determine eligibility for admittance to the Advanced Course and agree in writing upon admission to the Advanced Course to complete the course of instruction offered, unless released by the Department of the Army. Veterans may receive credit for portions of the

ROTC military course for military service completed prior to enrollment in ROTC.

WHAT ROTC OFFERS

Uniforms, equipment, ROTC textbooks are issued without cost to formally enrolled cadets.

Students having successfully completed the Basic Course, or having received credit for the basic course by having served on active duty in the Armed Forces, and meeting the Advanced Course admission requirements are paid a subsistence allowance, currently amounting to $100.00 per academic month, during the time they are taking the Advanced Course.

After the student completes the Advanced Course and receives his baccalaureate degree from the University, he is commissioned as a second lieutenant in the United States Army Reserve.

Students who have completed the first year Advanced Course and have displayed outstanding qualities of military leadership, high moral character, and definite aptitude for military service are designated "Distinguished Military Students." Students so honored who maintain the standards until graduation are designated "Distinguished Military Graduates," and may be offered an appointment in the Regular Army.

Policies affecting enrollment and continuance of students in the Senior Division of the Reserve Officers Training Corps are included in the provisions of the Selective Service Act of 1950. This Act provides for military deferment of students (certain basic course students upon their request, and all advanced course students) until completion of their academic course under the following conditions:

1. Students enrolled in the ROTC must remain in good standing in both their academic and military courses.
2. They must demonstrate proper and sufficient aptitude and leadership characteristics ultimately to qualify them for appointment as commissioned officers.
3. They must attend and successfully complete summer training camp (usually at the end of the Junior Year).
4. They are required to sign an agreement to accept a

commission in the Army, if and when tendered, and to serve not to exceed two (2) years on active duty as an officer, subject to call by the Secretary of the Army.

SPECIAL FEES

An Activity Fee of $3.00 is required of all ROTC Cadets to support Cadet Corps activities such as the Cadet Marksmanship Program and the Military Ball.

CURRICULUM IN MILITARY SCIENCE

The Military Science curriculum covers four years and is divided into two courses: The Basic Course and the Advanced Course.

THE BASIC COURSE

The first 2 years of Military Science constitute the Basic Course, which furnishes a background in the development of the U.S. Army and of the Army's role in support of national objectives. Additionally, fundamentals of leadership and management and application thereof are stressed.

MS 101 WORLD MILITARY HISTORY 2 cr.

A study of land, sea and air war, including the relationship of strategy and tactics to geography, economics, sociology and technology through the ages; the relationship between members of the Armed Forces and the public; evolution of warfare including principles of war and weapons and equipment associated therewith; the effect of nuclear weapons on traditional concepts. Also, see Leadership Laboratory.

MS 102 AMERICAN MILITARY HISTORY 2 cr.

A study of the development of American military institutions, policies, experiences, and traditions in peace and war from colonial times to the present. Emphasis will be on the relationship between the military and other aspects of American Society and the role of the military in the establishment, expansion, preservation, and development of the nation. Also, see Leadership Laboratory.

MS 203 FUNDAMENTALS OF TACTICAL OPERATIONS WITH APPLIED TERRAIN ANALYSIS AND MILITARY TOPOGRAPHY 2 cr.

The structure, personnel, and equipment resources, and mission capabilities of unit level combat teams are studied and applied to various types of combat operations with emphasis on terrain analysis and military map usage. Also, see Leadership Laboratory.

MS 204 NATIONAL SECURITY AND CONCEPT OF FORCE 2 cr.

A survey of the broad spectrum of national resources and their relationship to the development of national power; tangible elements including geography, population, economic and military forces, intangible elements of social organization, ideology, and political systems. The role which military power plays in preserving the nation's freedoms; organization for U.S. national defense to include the magnitude of management implications. Also, see Leadership Laboratory.

THE ADVANCED COURSE

The second two years constitute the Advanced Course which provides case studies in leadership and management, leading to the development of the student's ability to express himself clearly and accurately with emphasis on analysis of military problems, the evaluation of situations, and preparation and delivery of logical solutions. Also covered is a study of combat operations and various military teams to include military geography, the coordination and planning necessary between the elements of the teams and the task force.

MS 305 LEADERSHIP AND THE MILITARY TEACHING/LEARNING RELATIONSHIP 3 cr.

A study in the practical application of the principles of Leadership/Managementship as applied in the classroom and the field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

MS 306 ADVANCED LEADERSHIP AND MANAGEMENT 3 cr.

Analysis of the leader's role in directing and coordinating the efforts of individuals and small units in the execution of offensive and defensive tactical missions, to include communication systems, internal defense/development and the military team, intelligence gathering, and the role of the various branches of the Army. Also, see Leadership Laboratory.

MS 407 THEORY AND DYNAMICS OF THE MILITARY TEAM 3 cr.

Study of combat operations and the various military teams to include logistics as it applies to task force supply and movement and the planning and coordination necessary between the elements of Division Trains and Task Force. Also, see Leadership Laboratory.

MS 408 SEMINAR IN MILITARY ANALYSIS AND MANAGEMENT 3 cr.

A contemporary analysis of the use of the military in world affairs to include the importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations will be presented as they relate to military justice, administration, and the obligation and responsibilities of an officer.

Leadership Laboratory (MS 999)

A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses (except in MS 408), it provides for articulation of students from the basic experience and development of the individual to the application of responsibilities and professional experiences in a meaningful environment.

Summer Camp

Students attend a six-week summer camp upon completion of the first year of the Advanced Course. Time at camp is devoted to the practical application of principles and theories taught during the preceding school years. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel and pay in the amount of one half the pay of a second lieutenant per month.

DIRECTORY

ADMINISTRATIVE ORGANIZATION OF THE UNIVERSITY

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BERNARD T. GILLIS . . . . . Academic Vice President & Provost
DALE P. MARCHAND . . . . . Assistant to Academic Vice President
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GEORGE T. WILEY . Associate Dean of the Graduate School for Research
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FRED DAKAK . . . . . Dean of Admissions
PETER METARKO . . . . . Associate Director of Admissions
LYMAN CONNOR . . . . . Assistant Director of Admissions
JOHN J. NOLD . . . . . Director, Computer Center
BARBARA EISEN . . . . . Assistant Director, Computer Center
BRUCE BEAUMONT . . . . . Assistant Director, Computer Center
THOMAS P. CUNNINGHAM . . . . . Assistant Director, Computer Center
ROBERT L. WOODARD . . . . . Director of Institutional Research
LAWRENCE D. BERGMAN Executive Director of University Foundation and Associate Director, Instructional Resources Center
JAMES M. NIX . . . . . Director of Cultural Affairs
HAROLD DOCK . . . . . Director of Laboratory Experiences
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OWEN DOUGHERTY . . . . . Housing Director
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LARRY JUDGE . . . . . Director Alumni Affairs
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FREDERICK A. JOSEPH . . . . . Director of Financial Aid
WILLIAM SRSIC . . . . . Assistant Director of Financial Aid
ROBERT O. WARREN . . . . . Vice President of University Studies
C. DONALD SEAGREN . . . . . Registrar
FREDERICK A. SEHRING . . . . . Assistant Registrar
WILLIAM E. LAFRANCHI . . . . . Director of Libraries
RONALD A. STEINER . . . . . Associate Director of Libraries
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DIANE L. DUNTLEY . . . . . Associate Director, EOP
CHARLES T. BUFORD . . . . . Director of Personnel
HAROLD C. McCORMICK . . . . . Business Manager
RICHARD T. WOLFE . . . . . Assistant Business Manager
JOHN FELICE . . . . . Director Employee Relations
CHRISTOPHER KNOWLTON . . . . Manager, Student Co-op Association
CHARLES F. RECESKI . . . . . Inventory Control Officer

DEPARTMENT CHAIRMEN

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RICHARD E. BERRY . . . . . Physics
KENNETH W. BRODE . . . . . Germanic-Slavic Languages
CHARLES W. FAUST . . . . . Romantic-Classical Languages
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FRANCIS W. LIEGEY . . . . . Biology
RICHARD D. MAGEE . . . . . Psychology
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DONALD A. WALKER . . . . . Economics
WILLIAM F. WEGENER . . . . . Criminology
MELVIN R. WOODARD . . . . . Mathematics
To be appointed . . . . . Chemistry

SCHOOL OF BUSINESS

DENNIS D. TIGER . . . . . Business & Distributive Education
CHARLES L. COOPER . . . . . Business Management

SCHOOL OF EDUCATION

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DON-CHEAN CHU . . . . . Foundations of Education
ROBERT L. KING . . . . . Elementary
DANIEL V. MATTOX . . . . . Learning Resources & Mass Media
MORTON M. MORRIS . . . . . Special Education
GEORGE L. SPINELLI . . . . . Counselor Education
WARNER L. TOBIN . . . . . University School

SCHOOL OF FINE ARTS

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BENJAMIN T. MILLER . . . . . Art

SCHOOL OF HEALTH SERVICES

ROBERT J. FIRENZE . . . . . Safety Science
CHARLES A. GODLASKY . . . . Health & Physical Education for Men
C. ELIZABETH McCAULIFF . Health & Physical Education for Women
MARIAN A. MURRAY . . . . . Nursing
RICHARD M. STRAWCUTTER . . . . . Allied Health Professions

SCHOOL OF HOME ECONOMICS

RUTH A. BROWNING . . . . . (Acting) Home Economics Education
DONNA L. STREIFTHAU . . . . . Consumer Service
ALLEN M. WOODS . . . . . Food and Nutrition

RESERVE OFFICER TRAINING CORPS

COLONEL JOHN P. BURKE . . . . . Military Science

DIRECTORS OF SPECIAL CLINICS

MARION M. GEISEL . . . . . Psychological Clinic
MAUDE BRUNGARD . . . . . Speech and Hearing Clinic
JERRY FIDDLER . . . . . Reading Clinic

DIVISIONAL COORDINATORS

JAMES R. GREEN . . . . . Associate Dean, Humanities
RAYMOND LEE . . . . . Associate Dean, Social Sciences
CHARLES R. FUGET . . . . . Associate Dean, Natural Sciences & Math

OPERATIONAL COMMITTEES OF THE UNIVERSITY

The following committees are concerned primarily with the day to day operations of the University:

Academic Council . . . . . Bernard T. Gillis
Alumni Association . . . . . Larry A. Judge
Athletics (Senate Committee F) . . . . . S. Trevor Hadley
Faculty Council . . . . . John G. Watta
Library and Instructional Materials . . . . . William Lafranchi
President's Cabinet . . . . . William W. Hassler
ROTC Selection . . . . . Col. John P. Burke
Student Cooperative Association . . . . . Christopher Knowlton

UNIVERSITY SENATE

A revised University Senate became effective September 1971. The Senate consists of faculty, administrators, and students. The Chairman of the University Senate is Mr. Lorrie J. Bright; Mr. Donald G. Eisen is Vice Chairman; Miss Cleo McCracken, Secretary; and Dr. J. Merle Rife, Parliamentarian. The committees of the Senate are as follows:

(A) The Rules Committee . . . . . J. Merle Rife
(B-1) The Academic Affairs Committee . . . . . Richard Strawcutter
(B-2) The Curriculum Committee . . . . . Ronald C. Green
(C) Committee on Faculty Tenure, Promotion and Academic Freedom . . . . . Martin Stapleton
(D) The Graduate Committee . . . . . Joseph M. Gallanar
(E) Committee on Faculty Research, Library, and Educational Services . . . . . Robert L. Woodard
(F) Committee on Student Affairs and Athletics . . . . S. Trevor Hadley
(G) Committee on University Development & Finance . Isadore R. Lenglet
(H) Committee on Faculty Affairs . . . . . John J. Hays
(I) Committee on Continuing and Non-Resident Education . . . . . Charles Godlasky

The Students' group of the President's Cabinet which consists of the following is an input for the students to voice their concern on any general matter within the University.

S. Trevor Hadley (Co-coordinator) . . . . Vice President for Student Affairs
(Student Co-coordinator) . . . . . President, Student Government
Gary Belonzi . . . . . Vice President, Student Government
Cathy Jones . . . . . Student Union Board
Doug Horner . . . . . Student Union Board
Gail Smith . . . . . Editor, THE PENN
Pat Riley . . . . . Interfraternity Council President
Linda Dodson . . . . . Women's Residence Hall Association
Mike Hennigan . . . . . Men's Residence Hall Association
Harold Rosemond . . . . . Black Students League
Paul Letso . . . . . President, Senior Class

EMERITI

MAMIE L. ANDERZHON, Associate Professor — Geography
Ph.B., M.S., University of Chicago

LOIS C. BLAIR — Professional Laboratory Experiences
B.A., Grove City College; M.Ed., Pennsylvania State University; Ed.D., Teachers College, Columbia University; LL.D., Grove City College

ROBERT W. BURGGRAF — Music
B.S., Columbia University; A.M., University of Kentucky

RALPH W. CORDIER — Dean of Academic Affairs
A.B., Manchester College; A.M., Ph.D., Ohio State University

DONALD E. HOFFMASTER — Biology
B.S. Slippery Rock State College; M.S., Cornell University; Ph.D., West Virginia University

JOY E. MAHACHEK — Chairman, Mathematics; Coordinator of Secondary Education Departments
A.B., State College of Iowa; A.M., Columbia University; Ph.D., University of Pittsburgh

REGIS A. McKNIGHT — Health and Physical Education
B.S., Indiana University of Pennsylvania; M.A., Columbia University

WILLIS E. PRATT — Chancellor
A.B., Allegheny College; A.M., Ph.D., University of Pittsburgh; LL.D., Westminster College; LL.D., University of Pittsburgh

RALPH W. REYNOLDS — Art
B.A., Beloit College; M.A., State University of Iowa

PAUL A. RISHEBERGER — Foundations of Education
A.B., Washington and Jefferson College; A.M., Ph.D., University of Pittsburgh

ALICE K. SCHUSTER — History
B.A., M.A. Ph.D., University of Pittsburgh

DWIGHT E. SOLLBERGER — Coordinator, Natural Sciences
B.S., Slippery Rock State College; Ph.D., Cornell University

LAWRENCE C. STITT — Music
B.S., M.A., New York University

MATTHEW H. VOLM — Foreign Languages
Philologisches Staatsexamen, Universitat Munster; Ph.D., University of Virginia

EUPHEMIA NESBITT WADDELL — Library
A.B., College of Wooster, M.L.S., Library School, University of Illinois

PAUL M. WADDELL — Physics
A.B., Bethany College; M.A., Cornell University

ALBERT J. WAHL — History
B.S., M.S., Lafayette College; Ed.D., Temple University

FLORENCE WALLACE — History
A.B., Wellesley College; A.M., Columbia University

NORAH E. ZINK — Geography
B.S., University of Utah; A.M., Columbia University; Ph.D., University of Chicago

THE FACULTY

WILLIAM W. HASSLER, Professor — President
B.S., Juniata College; M.S., Ph.D., University of Pennsylvania

BARBARA ANN AIERSTOCK, Associate Professor — Women's Phys. Ed.
A.B., Gettysburg College; M.Ed., Temple University: Ed.D., Temple University

ROBERT K. ALICO, Associate Professor — Biology
B.S., M.S., Ph.D., St. Bonaventure University, New York

EDWARD L. ANDERSON, Professor — English
B.S., M.A., University of Michigan; Ph.D., New York University

RUTH ANDERSON, Associate Professor — Home Economics
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

JOSEPH S. ANGELO, Professor — Mathematics
B.S. M.Ed., Indiana University of Pennsylvania; Ph.D., University of Pittsburgh

ANTHONY A. ANGELONI, Professor — Chairman, Department of Educational Psychology

B.Ed., Duquesne University; M.Ed., University of Pittsburgh; D.Ed., Pennsylvania State University

JOHN ARCHIBALD, JR., Assistant Professor — Sociology-Anthropology
B.A., Lehigh University; M.S.S., Bryn Mawr College

IDA Z. ARMS, Associate Professor — Mathematics
B.S. in Ed., Shippensburg State College; M.S., University of Illinois; M.Ed., Duke University

JACK L. ARMSTRONG, Assistant Professor — Psychology
B.S., University of Pittsburgh; M.Ed., University of Pittsburgh

ROGER W. AXFORD, Professor — Director of Community-University Studies
B.A., Nebraska Wesleyan University; M.A., Ph.D., University of Chicago

DAVID M. AZIMI, Associate Professor — Chairman, Sociology-Anthropology
B.A., L.L.B., Tehran University; M.A., Ph.D., New York University

TIBOR BACHMANN, Associate Professor — Music
Diploma, Franc Liszt State Royal Music Academy, Budapest, Hungary, D.Mu., Combs College of Music, Philadelphia, Pennsylvania

MARIE K. BAHN, Assistant Professor — Special Education
B.S., Shippensburg State College; M.Ed., Western Maryland College

WILLIAM M. BAHN, Professor — Educational Psychology
B.S., Shippensburg State College, M.Ed., Western Maryland College; Ed.D., West Virginia University

FRANK T. BAKER, Assistant Professor — Biology
B.S., Allegheny College, M.A., Trenton State College

RONALD L. BAKER, Professor — Elementary Education
A.B., Lebanon Valley College; M.Ed., D.Ed., Pennsylvania State University

DONALD J. BALLAS, Professor — Geography
B.S. in Ed., Clarion State College; M.A., University of Pittsburgh; Ph.D., University of Nebraska

BARBARA J. BALSIGER, Professor — Art
B.A., Indiana University of Pennsylvania; M.A., State University of Iowa; Ph.D., University of Pittsburgh

SUZANNE E. BARNETT, Associate Professor — Psychology
B.A., University of Maryland; M.A., Teachers College, Columbia University; M.A., Smith College; Ph.D., Indiana University; Ph.D., Michigan State University

DENNIS BARTHA, Associate Professor — Elementary Education
B.S., M.Ed., University of Pittsburgh

NANCY R. BARTHELEMY, Assistant Professor — Women's Physical Ed.
B.S., Sargent College, Boston; M.S. University of Wisconsin

FRANK F. BASILE, Associate Professor — Geography
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh

CHARLES BATTAGLINI, Instructor — University School
B.S., M.Ed., Indiana University of Pennsylvania

BRUCE BEAUMONT, Assistant Professor, Assistant Director Computer Center
B.S., Indiana University of Pennsylvania

LEE ROY H. BEAUMONT, JR., Professor — Business Education
B.S., Bloomsburg State College; M.Ed., Ed.D., University of Pittsburgh

MARGARET L. BECK, Associate Professor — English
A.B., Goucher College; A.M., University of Pennsylvania

THOMAS L. BECK, Associate Professor — Health & Phys Ed for Men
B.S., Slippery Rock; M.Ed., Duquesne University

WILLIAM R. BECKER, Professor — Acting Dean, School of Fine Arts
B.A., M.A., University of Northern Iowa; Ph.D., University of Iowa

PATRICIA A. BELL, Associate Professor — Home Economics
B.S., State University of New York; M.Ed., Penn State University

JANIS A. BELLO, Instructor — Residence Coordinator
B.A., University of Dayton; M.A., University of Cincinnati

HERBERT A. BENTON, Instructor — Sociology-Anthropology
B.A., Indiana University of Pennsylvania

PAUL BEN-ZVI, Associate Professor — Art
B.F.A., Pratt Institute, N.Y.; B.S., State University College, M.A.; M.F.A., University of Iowa

LAWRENCE BERGMAN, Associate Professor — Executive Director of University Foundation and Associate Director, Instructional Resources Center
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

ROBERT BERNAT, Associate Professor — Music
B.F.A., Carnegie Institute of Technology; M.F.A., Brandeis University

RICHARD E. BERRY, Professor — Chairman, Department of Physics
B.S., Lafayette; M.A., Ph.D., Princeton

BETTY I. BERTHY, Assistant Professor — Home Economics
A.B., Marshall University; M.S., West Virginia University

CHARLES H. BERTNESS, Associate Professor — Mathematics
B.S., Moorhead State College; M.A., University of Florida; Ph.D., University of Illinois

MARIO J. BETTA, Instructor — Business & Distributive Education
B.S., Shippensburg State College

WILLIAM W. BETTS, JR., Professor — English
A.B., Dickinson College; A.M., Ph.D., Pennsylvania State University

GARY J. BIRD, Instructor — Music
B.ME., Wisconsin State University; M.M., North Texas State University

SISTER EDWARDA BISS, Assistant Professor — Nursing
BSPHN, Catholic University of America; MSNED, St. Louis University

PATRICIA L. BLACK, Assistant Professor — Nursing
B.S., University of Pittsburgh; M.Ed., Duquesne University

WILLIAM A. BLACKSMITH, III, Assistant Professor — Men's Physical Education
B.S., Lock Haven State College; M.Ed., Indiana University of Pennsylvania

JOSEPH BOGAN, JR., Assistant Professor — Criminology
B.S., California State College; M.Ed., University of Pittsburgh

DANIEL N. BOONE, Associate Professor — Philosophy
B.A., M.A., Claremont Men's College; Ph.D., Claremont Graduate School

CARL W. BORDAS, Professor — Chemistry
B.S., M.Ed., D.Ed., Pennsylvania State University

NELSON H. BORMANN, Associate Professor — Special Education
B.S., Southwest Texas State College; M.A., Western Michigan University

DAVID T. BORST, Assistant Professor — Music
B.S., Fredonia State Teachers College; M.Ed., University of Buffalo

ELEANOR J. BOYER, Assistant Professor — English
B.S., Clarion State College; M.Ed., Indiana University of Pennsylvania

WALLIS D. BRAMAN, Professor — Music
B.S.M., Baldwin-Wallace College; M.M., Ph.D., University of Rochester

DAVID BREYER, Instructor — Business Management
B.S., M.B.A., Pennsylvania State University

JESSIE BRIGHT, Instructor — English
B.A., M.A., University of Rochester

LORRIE J. BRIGHT, Professor — English
A.B., Kenyon College; M.A., University of Rochester

KENNETH W. BRODE, Professor — Chairman, Germanic & Slavic Languages
A.B., M.A., Kent State University, Ph.D., University of Pittsburgh

JOHN BROUGHTON, III, Associate Professor — Mathematics
B.S., North Carolina State University, M.A., East Carolina University, D.Ed., Oklahoma State University

FREDERICK J. BROWN, Associate Professor — Criminology
A.B., St. Vincent College; MED, University of Pittsburgh

R. MORRISON BROWN, Professor — English
B.S., Shippensburg State College; A.M., University of Pennsylvania; Ph.D., Pennsylvania State University

RUTH ANNA W. BROWNING, Instructor — Act. Chm., Home Ec Education
B.A., Earlham College; M.A., Indiana University

MAUDE O. BRUNGARD, Professor — Special Education
B.S., Lock Haven State College; M.Ed., Ed. D., Pennsylvania State University

GARY L. BUCKWALTER, Professor — Physics
B.S., Pennsylvania State University; M.S., Ph.D., Catholic University of America

RICHARD C. BUCZEK, Associate Professor — Military Science
B.S., Indiana State College

GERALD M. BURIOK, Associate Professor — Mathematics
B.S., Indiana State College; M.A., Penn State; D.Ed., Pennsylvania State University

JOHN P. BURKE, Professor — Chairman, Department of Military Science
A.B., Syracuse University; M.Ed., Indiana State College

RONALD I. BURNER, Assistant Professor — Business Management
B.S., Duquesne University; M.BA., West Virginia University

SANDRA L. BURWELL, Assistant Professor — Art
B.S., M.Ed., Pennsylvania State University

JOHN F. BUSOVICKI, Assistant Professor — Mathematics
B.S., Indiana University of Pennsylvania; M.S., Notre Dame

GARY BUTERBAUGH, Assistant Professor — Computer Science
B.S., Indiana University of Pennsylvania; M.A., Syracuse University

MARGARET O. CALDWELL, Assistant Professor — English
A.B., Grove City College; M.Ed., Indiana University of Pennsylvania

THOMAS CAMPISANO, Instructor — Health and Physical Education
B.A., Indiana University of Pennsylvania

PATRICK A. CARONE, Professor — Political Science
A.B., M.A., West Virginia University; Ph.D., Duke University

JOSE N. CARRANZA, Assistant Professor — Foreign Languages
B.S., Indiana University of Pennsylvania; M.A., University of Pittsburgh

BRUCE D. CARTWRIGHT, Associate Professor — Psychology
A.B., Waynesburg College; A.M., West Virginia University

CHARLES D. CASHDOLLAR, Assistant Professor — History
B.S., Indiana University of Pennsylvania; M.A., Ph.D., University of Pennsylvania

JAMES F. CAWLEY, Assistant Professor — Business Management
B.S., St. Vincent College; M.B.A., Duquesne University; C.P.A.

VINCE CELTNIEKS, Assistant Professor — Health and Physical Education
B.A., American University; M.S., University of Montana

MARY ANN CESSNA, Instructor — Home Economics
B.S., Indiana University of Pennsylvania

CHRISTINA A. CHA, Associate Professor — Music
B.A., Ewha University, Seoul, Korea; B.M., Illinois Wesleyan University, Bloomington; M.S.M., Union Theological Seminary, New York

RICHARD R. CHAMBERLIN, Associate Professor — Library
B.A., Northeastern University; M.A., Michigan State University; M.A., University of Denver

JACK CHAMBERS, Associate Professor — Geography
B.S., M.S., University of Chicago, Ph.D., University of Bristol

BENJAMIN C. CHAN, Professor — Philosophy
B.A., Th.B., St. Paul Bible College; B.D., Eastern Baptist Seminary; M.A., University of Washington; Ph.D., Temple University

WILLIAM D. CHAPMAN, Assistant Professor — Special Education
B.S., M.S., West Virginia University

MICHAEL R. CHARNEGO, Instructor — Biology
B.S., M.Ed., Indiana University of Pennsylvania

EDWARD CHASZAR, Associate Professor — Political Science
B.A., M.A., Western Reserve University; L.L.B., Peter Pazmany University, Budapest, Hungary

VEERAVANALLUR, V. CHELLAPPA, Instructor — Computer Science
B.S., University of Kerala, India; M.S., Case Western Reserve University

JOHN CHELLMAN, Professor — Dean, School of Health Services
B.S., Slippery Rock State College; Ed.M., University of Pittsburgh; Ed.D., George Peabody College for Teachers

NICHOLAS CHRISTODOLEAUS, Associate Professor — Chemistry
B.S., Athens University, Greece; Ph.D., Louisiana State University

DON-CHEAN CHU, Professor — Chairman, Dept. of Foundations of Education
A.B., National Central University, China; Ed.M., University of Maryland; Ed.D., Columbia University

JOSEPH C. CLARK, Associate Professor — Geoscience
B.S., University of Texas; M.A., University of Texas; Ph.D., Stanford University

WINSTON B. CLARK, Associate Professor — Military Science
B.S., U.S. Military Academy

VAUGHN CLAY, Associate Professor — Art
B.A., Westminster College; M.Ed., University of Pittsburgh

STANLEY COHEN, Associate Professor — Criminology
B.A., University of Cincinnati; J.D., Salmon P. Chase, College of Law

EDWARD G. COLEMAN, Associate Professor — Chemistry
B.S., Wisconsin State College; M.S., University of Wisconsin; M.S., Carnegie Institute of Technology

ANTOINETTE L. COLUCCI, Instructor — Food and Nutrition
A.A., Hudson Valley Community College; B.S., State University at Plattsburgh; M.S., Purdue University

FRANK T. COMO, Professor — English
B.S., Indiana University of Pennsylvania; M.A., University of Pittsburgh; Ph.D., Arizona State University

CAROLYN J. COMPTON, Instructor — English
B.S., M.Ed., Indiana University of Pennsylvania

CAROL E. CONNELL, Assistant Professor — Library
A.B., Penn State, M.LS., University of Pittsburgh

LYMAN CONNOR, Assistant Professor — Assistant Director of Admissions
B.S., West Virginia College

THOMAS E. CONWAY, Associate Professor — Biology
B.S., University of Pittsburgh; M.ScT., Union College; Ed.D., West Virginia University

DAVID M. COOK, Professor — English
B.A., B.S., M.A., Ph.D., Ohio State University

CHARLES L. COOPER, Professor — Chairman, Dept. of Business Management
B.S., Indiana University of Pennsylvania; Ed.M., Ed.D., University of Pittsburgh

STEVEN CORD, Professor — History
B.B.A., City College of New York; M.A., Ed.D., Teachers College, Columbia University

JOSEPH J. COSTA, Associate Professor — Chemistry
B.A., St. Vincent College; M.Ed., University of Pittsburgh

HARRY CRAIG, Professor — English
B.A., Geneva College; M.A., Ph.D., University of Pittsburgh

WILLA RUTH CRAMER, Assistant Professor — Home Economics
B.S., Indiana University of Pennsylvania; M.S., Pennsylvania State University

ROBERT J. CRONAUER, Associate Professor — Art
B.S., Indiana University of Pennsylvania; M.A., Columbia University

BLAINE C. CROOKS, Associate Professor — Mathematics
B.A., Pennsylvania State University; Ed.M., Harvard

JOHN W. CROSS, Assistant Professor — Economics
B.A., Merrimack College; M.Ed., Fitchburg State College; M.A., University of Massachusetts

WALLACE R. CROUP, Instructor — Criminology
B.S., M.S., Florida State University

THOMAS P. CUNNINGHAM, Associate Professor — Assistant Director, Computer Center
B.S., M.S., Carnegie-Mellon University

BOB J. CUREY, Professor — English
B.A., Hillsdale College; M.A., University of Michigan; Ph.D., Wayne State University

WILLIAM E. CUTLER, Associate Professor — Educational Psychology
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

ROBERT E. DAIN, Asst. Professor — Dir. of Punxsutawney Branch Campus
A.B., Bob Jones University; M.A., University of Maryland

FRED DAKAK, Professor — Dean of Admissions
B.S., M.S., Ph.D., Southern Illinois University

S. JANE DAKAK, Assistant Professor — Health and Physical Education
B.S., M.Ed., University of North Carolina at Greensboro

ARLO DEAN DAVIS, Assistant Professor — Mathematics
B.A., William Penn College; M.A., Western Michigan University; Ed.S., Kalamazoo; Ph.D., University of Colorado

ALICE L. DAVIS, Associate Professor — Elementary Education
B.S., West Chester State; M.Ed., Penn State; Ed.D., Temple University

BETTY DAVIS, Associate Professor — Elementary Education
B.S., West Chester State College; M.Ed., D.Ed., Pennsylvania State University

CARL D. DAVIS, Assistant Professor — Health and Physical Education
B.A., Tarkio College, Missouri; M.Ed., University of Pittsburgh

CHARLES A. DAVIS, Professor — Music
B.S., Indiana University of Pennsylvania; M.A., New York University

CLARABEL T. DAVIS, Assistant Professor — University School
B.S., Indiana University of Pennsylvania; M.A., New York University

JOHN A. DAVIS, Associate Professor — English
B.A., Lehigh University; M.A., University of Pennsylvania

WAYNE J. DAVIS, Professor — Economics
A.B., Dickinson College; Ph.D., Rutgers University

MALCOLM M. DAY, Associate Professor — English
B.A., M.A., University of Florida; Ph.D., Western Reserve University

RUTH DE CESARE, Associate Professor — Music
A.B., Hunter College; M.S., Queens College; Ph.D., New York University

LEONARD B. DEFABO, Associate Professor — Educational Psychology
A.B., St. Mary Seminary and University; M.Ed., Duquesne University

ANTHONY G. DEFURIO, Assistant Professor — Art
B.S., Edinboro State College; M.Ed., Indiana University of Pennsylvania

JAMES M. DeGEORGE, Associate Professor — English
B.A., St. Thomas University; M.A., Ph.D., Tulane University

CAROLYN I. DEISHER, Assistant Professor — Mathematics
B.S., Kutztown State College; M.A., Pennsylvania State University

DANIEL DICICCO, Associate Professor — Music
B.S., Indiana University of Pennsylvania; M.M., University of Michigan

ALICE D. DICKIE, Instructor — Health and Physical Education
B.S., Slippery Rock State College

WILLIAM E. DIETRICH, JR., Assistant Professor — Biology
B.A., LaSalle; Ph.D., University of Pennsylvania

JOHN L. DIETZ, Assistant Professor — Music
B.M., Cleveland Institute of Music; MM, Cleveland Institute of Music

RICHARD A. DiSTANISLAO, Instructor — Ass't. to Dir., Kittanning
B.A., M.A., Indiana University of Pennsylvania

HAROLD A. DOCK, Associate Professor — Director of Professional Laboratory
B.S., M.Ed., Bowling Green State University; Ph.D., University of Tennessee

ROBERT H. DOERR, Assoc. Professor — Director, Armstrong Branch Campus
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

THOMAS J. DONGILLA, Assistant Professor — Art
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

ALBERTA R. DORSEY, Associate Professor — Elementary Education
B.S., California State College; M.Ed., University of Pittsburgh

OWEN J. DOUGHERTY, Associate Professor — Housing Director
B.S., M.Ed., Pennsylvania State University

VICTOR S. DRESCHER, Instructor — Foreign Languages
B.S.Ed., Slippery Rock State College; M.A., Middlebury College

JOHN J. DROPCHO, Assistant Professor — Art
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

DONALD D. DUNCAN, Assistant Professor — Mathematics
B.S., Slippery Rock College; M.Litt., University of Pittsburgh; M.A., Pennsylvania State University

DIANE L. DUNTLEY, Associate Professor — Academic Coordinator EOP
A.B., Alleg College; M.Ed., State University of New York

CAROL ANN ECKMAN, Assistant Professor — Phys. Ed. for Women
B.S., Lock Haven; M.S., West Virginia University

JERRY K. EDDY, Associate Professor — Physics
B.A., West Liberty State College; M.S., Ph.D., West Virginia University

KENNETH F. EDGAR, Professor — Psychology
B.A., Pennsylvania State University; M.A., Ph.D., University of Pittsburgh

BARBARA EISEN, Instructor — Assistant Director, Computer Center
A.B., Case Western Reserve University

DONALD G. EISEN, Associate Professor — English
A.B., Adelbert College, Western Reserve; M.A., Western Reserve University

ANN T. ELLIOTT, Assistant Professor — Health and Physical Education
B.S., Russell Sage College; A.B., Berea College; M.A., New York University

MARY LOUISE ELTZ, Assistant Professor — Health and Physical Education
B.S., M.Ed., East Stroudsburg State College

ROBERT W. ENSLEY, Associate Professor — English
A.B., Ohio Wesleyan University; A.M., Columbia University

CHARLES W. FAUST, Professor — Chairman, Romance & Classical Languages
B.A., Indiana State Teachers College, Terre Haute; M.A., Middlebury College

FRANK FAZIO, JR., Associate Professor — Chemistry
B.S., California State College; M.A., University of Northern Iowa; M.Ed., Ph.D., University of Pittsburgh

JOHN M. FELICE, Assistant Professor — Director Employee Relations
B.S., University of Pittsburgh; M.S., University of Illinois

GENE A. FELIX, Assistant Professor — Speech and Hearing
B.A., St. Francis College; M.S., Pennsylvania State University

RONALD T. FERGUSON, Associate Professor — History
B.A., State University of New York (Albany); M.A., Pennsylvania State University; Ph.D., University of Minnesota

LOUISE FERNANDEZ, Professor — Home Economics
B.S., Indiana University of Pennsylvania; M.A., Ed.D., New York University

VINCENT J. FERRARA, Professor — Philosophy
B.A., Cathedral College; M.A., St. John's University; Ph.D., Fordham University

GARY M. FERRENCE, Professor — Biology
B.S., Kutztown State College; M.A.T., Ed.D., Indiana University, Bloomington

JERRY FIDDLER, Assistant Professor — Director of Reading Clinic
B.S., Clarion State College; Ed.M., State University of New York

ROBERT J. FIRENZE, Associate Professor — Chairman, Safety Sciences Department
B.S., M.S., New York University

FERNAND FISEL, Associate Professor — Foreign Languages
B.A., Atlantic Union College; M.A., Andrews University

MARSHALL G. FLAMM, Associate Professor — Speech and Hearing Clinic, Special Education
A.B., University of Pennsylvania; A.M., Temple University

LIDA T. FLEMING, Assistant Professor — University School
B.S., Indiana University of Pennsylvania; Ed.M., Pennsylvania State University

PEGGY L. FLETCHER, Instructor — Business Management
B.A., Thiel College; MBA, University of Pittsburgh

WILLIAM R. FORBES, Assistant Professor — Biology
B.A., Indiana Central College; M.A., Ph.D., Indiana University, Indiana

WILLIAM M. FORCE, Assistant Professor — English
A.B., M.A., Colgate University

OLIVE M. FORNEAR, Assistant Professor — Music
B.S., Indiana University of Pennsylvania; M.M., West Virginia University

JOHN N. FOX, Associate Professor — Physics
B.S., LeMoyne College; M.S., The Catholic University of America; Ph.D., Wesleyan University

JOHN E. FRANK, Associate Professor — Assistant Dean of Men
B.S., Indiana University of Pennsylvania; M.S., Westminster College; Ph.D., Case Western Reserve University

HELGA P. FREUND, Associate Professor — Art
B.F.A., Rhode Island School of Design; M.Ed., Columbia University

JOHN R. FREUND, Professor — English
A.B., Miami University; A.M., Miami University; Ph.D., Indiana University

ERNEST B. FRICKE, Associate Professor — History
A.B., Muhlenburg College; M.A., Lehigh University

WERNER J. FRIES, Professor — Foreign Languages
B.S., M.A., Ph.D., Johns Hopkins University

DONALD P. FRITZ, JR., Assistant Professor — English
B.S., M.Ed., Indiana University of Pennsylvania

EDWIN J. FRY, Instructor — Music
B.M., M.M., DePaul University

CHARLES R. FUGET, Professor — Associate Dean of Natural Sciences and Mathematics
B.S., Geneva College; M.S., Ph.D., Pennsylvania State University

SAMUEL F. FURGIUELE, Professor — Director, Public Relations
B.S., Indiana University of Pennsylvania; M. Litt., University of Pittsburgh

NORMAN W. GAGGINI, Assistant Professor — Physics
B.S., M.S., Indiana University of Pennsylvania

JOSEPH M. GALLANAR, Professor — Dean, Graduate School
B.A., M.A., University of Washington; Ph.D., The John Hopkins University

ELEANOR M. GALLATI, Assistant Professor — Home Economics
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

WALTER W. GALLATI, Professor — Biology
A.B., Drew University; M.S., University of Miami (Fla.); Ph.D., Ohio State University

BERNARD JAMES GANLEY, Professor — Administrative Vice President
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh

JOAN C. GANLEY, Instructor — Consumer Services
B.S., Indiana University of Pennsylvania

CLARENCE A. GARVIN, Associate Professor — Economics
B.A., University of Tennessee; M.A., University of Chicago; Ph.D., University of Tennessee

THOMAS G. GAULT, Professor — Chairman, Department of Geography
B.S., Middle Tennessee State College; M.A., Ed.D., George Peabody College (Nashville)

MARION M. GEISEL, Assistant Professor — Director, Psychological Clinic
B.S., M.Ed., Indiana University of Pennsylvania

CLYDE C. GELBACH, Professor — Chairman, Department of History
A.B., M.Litt., Ph.D., University of Pittsburgh

VIRGINIA GOULD GERALD, Associate Professor — Sociology-Anthropology
B.A., University of Colorado; M.A., University of Arizona

GAIL J. GERLACH, Assistant Professor — University School
B.S., Indiana University of Pennsylvania; M.A., Teachers College, Columbia University

FRANK GHESSIE, JR., Assistant Professor — Business Education
B.A., M.Ed., Pennsylvania State University

RAYMOND D. GIBSON, Associate Professor — Mathematics
B.S., Slippery Rock State College; M.S., Westminster College; M.A., University of Illinois

TIMOTHY P. GILBERT, Assistant Professor — Military Science
B.S., U.S. Military Academy

BERNARD T. GILLIS, Professor — Academic Vice President and Provost
B.S., Loras College; Ph.D., Wayne State University

RALPH M. GLOTT, Professor — Elementary Education
B.S., California State College; M.Ed., D.Ed., University of Pittsburgh

CHARLES A. GODLASKY, Professor — Chairman, Health & Phys. Ed.
B.S., M.S., Ed.D., Penn State University

IRVING GODT, Associate Professor — Music
B.A., Brooklyn College; M.A., Ph.D., New York University

CAROL ANN R. GOFF, Instructor — Nursing
BSN, Villa Maria College

LOUIS L. GOLD, Professor — Biology
B.S., M.Ed., University of Pittsburgh; Ph.D., Ohio State University

WALTER GOLZ, Associate Professor — Music
B.S., Trenton State College; A.M., Columbia University

THOMAS D. GOODRICH, Professor — History
B.A., University of California, SBC, Santa Barbara; M.A., Ph.D., Columbia University

DOROTHY W. GOURLEY, Associate Professor — English
B.Ed., M.Ed., Indiana University of Pennsylvania

CHARLES CURTIS GRAHAM, Instructor — Criminology
B.A., Point Park College

WALTER GRANATA, Professor — Chairman of Geoscience
B.S., Hamilton College; M.A., University of Missouri; Ph.D., University of Wyoming

BROOKE V. GRANT, Associate Professor — Sociology-Anthropology
B.S., Indiana University of Pennsylvania; M.A., University of Pittsburgh

JOHN GEORGE GRASSINGER, JR., Assistant Professor — Library
B.S., California State College; M.A., Purdue University; M.L.S., University of Pittsburgh

JOHNNIE L. GRAVES, Assistant Professor — Assistant Dean of Women
B.A., Howard University; M.Ed., University of Pittsburgh

JAMES L. GRAY, Professor — English
B.A., Abilene Christian College; M.A., University of Texas; Ph.D., Duke University

WILLIAM F. GRAYBURN, Professor — English
A.B., M.A., University of Pittsburgh; Ph.D., Pennsylvania State University

WALTER S. GREAVES, Assistant Professor — Biology
B.S., State University of New York; M.S., Ohio University; Ph.D., University of Chicago

JAMES R. GREEN, Professor — Associate Dean of the Humanities
B.S., Lafayette College; A.M., Columbia University; Ph.D., New York University

RONALD C. GREEN, Professor — Political Science
B.S., State University of N.Y. at Oswego; M.A., State University of N.Y. at Albany

WILLIAM G. GRESSLEY, Instructor — Food and Nutrition
B.S., Indiana University of Pennsylvania

BARBARA E. GROSS, Instructor — Home Economics
B.S., Indiana University of Pennsylvania

DAVID E. GROVER, Professor — Psychology
B.A., Gettysburg College; M.A., Ph.D., University of Kentucky

DANIEL S. GRUBB, Professor — English
B.A., Wheaton College, Ill.; M.A.T., Duke University; M.A., Ph.D., University of Michigan

CAROLYN R. GRUNDY, Assistant Professor — Library
B.A., Grove City College; M.S.L.S., University of Illinois

ANTONIO M. GUARDIOLA, Assistant Professor — Foreign Languages
Maestro, Escuela Normal de la Habana (Cuba); Doctor en Pedagogia, University of Habana (Cuba)

AURORA P. GUARDIOLA, Assistant Professor — Foreign Languages
Maestro, Escuela Normal de la Habana (Cuba); Doctor en Pedagogia, University of Habana (Cuba)

S. TREVOR HADLEY, Professor — Vice President of Student Affairs
B.S., Indiana University of Pennsylvania; M.Ed., D.Ed., University of Pittsburgh

HARRY W. HALDEMAN, Associate Professor — English
B.S., West Chester; M.A., Pennsylvania State University

FRANK W. HALL, II, Associate Professor — Geoscience
B.A., Franklin & Marshall, Lancaster, Pa.; M.S., Ph.D., University of Montana

VIRGINIA S. HALUSKA, Instructor — Nursing
BSN, University of Pittsburgh

ROBERT W. HAMILTON, Assistant Professor — Art
B.S., M.Ed., Indiana University of Pennsylvania

ARVILLA T. HARROLD, Assistant Professor — Music
A.B., Colorado College of Education, Greeley, Colorado; M.A., Eastman School of Music

MARY M. HART, Assistant Professor — Nursing
B.S.N., M.Ed., University of Pittsburgh

RICHARD A. HARTLINE, Professor — Chemistry
B.S., Kutztown State College; M.S., University of Arizona; Ph.D., University of California

MARLIN E. HARTMAN, Associate Professor — Mathematics
B.S., Clarion State College; M.Ed., University of Pittsburgh; D.Ed., University of Pittsburgh

E. SAMUEL HATFIELD, Associate Professor — History
A.B., A.M., West Virginia University

JOHN J. HAYS, Professor — Educational Psychology
B.A., Geneva College; M.A., Stetson University; Ph.D., University of North Carolina

MALCOLM R. HAYWARD, III, Assistant Professor — English
B.A., Drew University; M.A., Ph.D., Tulane University

RICHARD HAZLEY, Associate Professor — English
A.B., University of Pittsburgh; A.M., Columbia University

WILLIAM I. HEARD, Associate Professor — Chemistry
B.S., Pennsylvania State University; Ed.M., University of Pittsburgh

NOLAND R. HEIDEN, Associate Professor — Geography
A.B., Western Michigan University; M.A., University of Michigan; Ph.D., University of Michigan

RICHARD F. HEIGES, Professor — Chairman, Department of Political Science
B.S., Indiana University of Pennsylvania; M.A., Ph.D., Ohio State University

JACKSON W. HEIMER, Professor — English
A.B., M.A., University of Kentucky; Ph.D., University of Cincinnati

ISABEL T. HELMRICH, Associate Professor — Educational-Psychology
B.A., Westminster College; M.Ed., University of Pittsburgh

ALICE R. HELTEBRAN, Instructor — Nursing
B.S.N., University of Pittsburgh

WILLARD W. HENNEMANN, JR., Professor — Mathematics
B.S., Towson State College of Maryland; M.A.T., Ph.D., Cornell University

ISOLDE A. HENNINGER, Associate Professor — Foreign Languages
B.A., M.A., Ohio State University

ANITA C. HENRY, Assistant Professor — Foreign Languages
B.A., M.A., Emory University

ROBERT M. HERMANN, Professor — Chairman, Department of Philosophy
B.S., Indiana University of Pennsylvania; A.B., M.A., Ph.D., University of Pittsburgh

KENNETH E. HERSHMAN, Associate Professor — Physics
B.S., Purdue University; M.S., Purdue University; Ph.D., Purdue University

PAUL R. HICKS, Assistant Professor — Library
A.B., University of South Carolina; M.A.L.S., George Peabody College for Teachers

ELSIE M. HILEMAN, Associate Professor — Business Education
B.S., Grove City College; M.Ed., Pennsylvania State University

JOSEPH B. HILL, Instructor — Criminology
B.A., Duquesne University

E. SAMUEL HOENSTINE, Professor — Director of Career Services
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University; D.Ed., University of Pittsburgh

HARRY G. HOLT, Associate Professor — Economics
B.S., Indiana University of Pennsylvania; M.S., Bucknell University

JAMES D. HOOKS, Assistant Professor — Library
B.S., Clarion State College; M.L.S., University of Pittsburgh

NANCY FOX HOOVER, Assistant Professor — Music
B.M., West Virginia University; M.M., University of Michigan

RICHARD HORNFECK, Assistant Professor — Health and Physical Education
B.S., M.S., The George Washington University

HELEN B. HOVIS, Assistant Professor — Home Economics
B.S., Muskingham College; M.Ed., Pennsylvania State University

JOHN P. HOYT, Professor — Mathematics
B.S., Middlebury College; M.A., Columbia University; Ph.D., George Washington University

LEON J. HUE, Associate Professor — Biology
B.S., M.Ed., Pennsylvania State University

MARVIN HUFF, Associate Professor — Economics
B.S., Slippery Rock State College; M.A., University of Illinois

H. EUGENE HULBERT, Associate Professor — Music
B.S., Indiana University of Pennsylvania; Ed.M., Pennsylvania State University, Ph.D., West Virginia University

RAYMONA E. HULL, Professor — English
A.B., Western Reserve University; A.M., Cornell University; Ed.D., Columbia University

JAN G. HUMPHREYS, Associate Professor — Biology
B.S., M.S., Ohio University; Ph.D., Virginia Polytechnic Institute

LAWRENCE A. IANNI, Professor — Associate Dean of Graduate School
B.S., Clarion State College; M.A., Ph.D., Western Reserve College

MARY E. IANNI, Assistant Professor — University School
B.S., Clarion State College; M.Ed., Indiana University of Pennsylvania

JAMES M. INNES, Associate Professor — Art
B.F.A., M.F.A., Kansas City Art Institute

DOMINIC J. INTILI, Associate Professor — Music
Mus. B., Mus. M., Oberlin Conservatory of Music

HERBERT EUGENE ISAR, Professor — Foreign Languages
B.A., M.A., New York University; Ph.D., University of Pennsylvania

D. ROBERT JACOBS, Associate Professor — Psychology
A.B., Franklin and Marshall College; M.S., Pennsylvania State University

RANDY L. JESICK, Ass't. Professor — Assistant Director of Public Relations
A.B., University of Pittsburgh; M.S., West Virginia University

CRAWFORD W. JOHNSON, Associate Professor — Director EOP
B.S., Fort Valley State College; M.A., Atlanta University

GEORGE B. JOHNSON, Associate Professor — Art
B.S., M.A., M.F.A., Indiana University, Bloomington, Indiana

HUGH B. JOHNSON, JR., Professor — Music
B.M. Oberlin Conservatory of Music; M.M., D.M.E., Indiana University, Bloomington, Indiana

ROBERT G. JOHNSON, Associate Professor — English
B.S., St. Peters College, M.A., Purdue University, Ph.D., Bowling Green University

RALPH L. JOHNSON, Assistant Professor — Health & Physical Education
B.S. Ed., Youngstown State University; M.Ed., Slippery Rock State College

FOSTER T. JONES, Assistant Professor — Romance & Classical Languages
B.A., Indiana University; M.A., Indiana University

M. KATHLEEN JONES, Professor — Dean, School of Home Economics
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University; Ph.D., Ohio State University

FREDERICK A. JOSEPH, Assistant Professor — Director Financial Aid
B.S., Mt. Union College; M.Ed., Kent State

LARRY A. JUDGE, Instructor — Alumni Director
B.S., Indiana University of Pennsylvania

RONALD A. JULIETTE, Assistant Professor — Learning Resource & Mass Media
B.S., Indiana University of Pennsylvania; M.S., Indiana University at Bloomington

JOHN F. KADLUBOWSKI, Associate Professor — History
B.A., M.A., University of Maryland

MAURICE F. KALIN, Associate Professor — Educational Psychology
A.B., Fairmont State College; M.A., Ed.D., West Virginia University

ARTHUR KANNWISHER, Professor — Philosophy
B.D., Pittsburgh Theological Seminary; B.A., Ph.D., University of Pittsburgh

MARY C. KATZBECK, Assistant Professor — Nursing
B.S., Indiana State University; M.S., Indiana University, Bloomington

DAVID KAUFMAN, Associate Professor — Library
A.B., M.A., University of Pittsburgh; M.L.S., Carnegie Institute of Technology

WILLARD J. KAYLOR, Associate Professor — Health and Physical Education
B.S., Wake Forest College; M.A., George Peabody College for Teachers

JOSEPH A. KAZAMEK, Professor — Elementary Education
A.B., M.Ed., Ph.D., University of Pittsburgh

ALMA B. KAZMER, Associate Professor — Home Economics
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

DAVID SHANKLAND KEENE, Professor — Political Science
A.B., Bowdoin College; A.M., Ph.D., Princeton University

WILLIAM F. KESSLER, Instructor — Music
B.M., Duquesne University; M.M., University of Cincinnati

ROBERT L. KING, Professor — Chairman, Elementary Education
B.S., Lycoming College; M.S., Bucknell University; Ed.D., Pennsylvania State University

ROBERT J. KIRBY, JR., Assistant Professor — Library
B.A., St. Francis College; M.S.L.S., Catholic University of America

STEVEN C. KLEIN, Assistant Professor — History
A.B., M.A., University of Kansas

MERLE G. KLINGINSMITH, Assistant Professor — Learning Resources
B.S., Edinboro State College; M.Ed., Pennsylvania State University

RICHARD S. KNAB, Associate Professor — Music
B.M., M.M., University of Michigan

MAY E. KOHLHEPP, Assistant Professor — Elementary Education
B.S., Indiana University of Pennsylvania; A.M., University of Pittsburgh

RICHARD W. KOLACZKOWSKI, Professor — Chemistry
B.S., University of Rhode Island; Ph.D., Cornell University

L. JUNE KORAB, Assistant Professor — Health and Physical Education
B.S., State University of Iowa; M.S., Indiana University, Bloomington

BARBARA KRASZEWSKI, Assistant Professor — English
B.S., Duquesne University; M.A., Carnegie-Mellon University

RUDOLF R. KRAUS, Associate Professor — Sociology
Abitur, Commercial Academy (Austria); M.A., University of Chicago

HELEN M. KRESAK, Assistant Professor — Nursing
B.S.N., M.P.H., University of Pittsburgh

VANCE R. KRITES, Assistant Professor — Political Science
B.A., Kent State University; M.A., Central Michigan University

JOSEPH S. KRUPNIK, Assistant Professor — English
B.S., M.A., Pennsylvania State University

SHERILL ANNE KUCKUCK, Assistant Professor — Assistant Dean of Women
B.A., Allegheny College; M.Ed., University of Pittsburgh

JACK KUHNS, Associate Professor — Elementary Education
B.S., Indiana University of Pennsylvania; Ed.M., University of Pittsburgh

GOPAL S. KULKARNI, Professor — Geography
B.S., Karnatak College, Dharwar, India; M.S., Banaras Hindu University, India; Ph.D., University of Pittsburgh

KENNETH J. KUNDLA, Instructor — Health and Physical Education
B.S., Slippery Rock State College

KAREN E. KUNKEL, Assistant Professor — Germanic & Slavic Language
A.B., Albright College; M.A., Middlebury College

WILLIAM E. LAFRANCHI, Professor — Director of Libraries
B.S., Clarion State College; M.S.L.S., University of Illinois

FRANK E. LANDIS, Associate Professor — Foreign Languages
A.B., M.Litt., University of Pittsburgh

DALE E. LANDON, Professor — History
B.A., M.A., Pennsylvania State University; Ph.D., University of Illinois

BETTY B. LANHAM, Associate Professor — Sociology-Anthropology
B.S., M.A., University of Virginia; Ph.D., Syracuse University

JOHN J. LANK, Associate Professor — Political Science
B.S., M.A., University of Detroit

JAMES W. LAUGHLIN, Professor — Associate Dean of Students
B.S., Indiana University of Pennsylvania; M.Ed., D.Ed., Pennsylvania State University

JACK LAVENBURG, Associate Professor — Learning Resources & Mass Media
B.S., New York University; M.A., Teachers College, Columbia University; Ed.D., University of Oregon

RAYMOND L. LEE, Professor — Associate Dean of Social Science
A.B., Eastern Michigan University; M.A., Ph.D., University of Michigan

TERRY C. LEE, Assistant Professor — Safety Sciences
B.S., Penn State; M.S. University of Pittsburgh

NEIL B. LEHMAN, Associate Professor — History
B.S., Bluffton College; M.S., Ohio State University

ISODORE R. LENGLET, Assoc. Professor — Vice President for University Development
B.S., Pennsylvania State University; M.A., University of Pittsburgh

ARTHUR A. LEONE, Associate Professor — Foreign Languages
LL.B., LaSalle Ext. University; B.A., Pennsylvania State University; M.A., University of Pittsburgh

EUGENE E. LEPLEY, Professor — Health and Physical Education
B.S., Slippery Rock State College; M.Ed., Indiana University of Pennsylvania; Ed.D., West Virginia University

ROBERT M. LETSO, Instructor — Health and Physical Education
B.S., M.Ed., Indiana University of Pennsylvania

MYRON H. LEVENSON, Professor — Sociology-Anthropology
B.S., M.A., University of Pittsburgh; Ph.D., University of North Carolina

WILLIAM J. LEVENTRY, Associate Professor — Educational-Psychology
A.B., Ed.M., University of Pittsburgh

FRANCIS W. LIEGEY, Professor — Chairman, Department of Biology
B.S., M.S., Ph.D., St. Bonaventure University

TIAN-MIN LIN, Assistant Professor — Philosophy
B.A., National Taiwan University; S.T.M., B.D., Yale University; Ph.D., Boston University

WILLIAM C. LINDSEY, Instructor — Counselor EOP
B.S., Howard University

DOROTHY I. LINGENFELTER, Associate Professor — University School
B.S., M.Ed., Indiana University of Pennsylvania

LINDA S. LINN, Associate Professor — Elementary Education
B.S., Edinboro State College; M.Ed., University of Pittsburgh

VICTOR LISCINSKY, Associate Professor — Health and Physical Education
B.S., Slippery Rock State College; M.Ed., University of Pittsburgh; L.P.T., University of Pittsburgh

YU-CHEN LIU, Professor — Home Economics
B.A., Cheeloo University (China); M.S., Ph.D., Oregon State University

ROBERT I. LLOYD, Assistant Professor — Music
B.S., Indiana University of Pennsylvania; M.S., Juilliard School of Music

PATRICIA LOMMOCK, Associate Professor — Health and Physical Education
B.S., Slippery Rock State College; M.Ed., University of Pittsburgh

WILLIAM F. LONG, SR., Associate Professor — Mathematics
B.A., Gettysburg College; M.A., Bucknell University

STANLEY W. LORE, Professor — Psychology
B.S., Clarion State College; M.Ed., D.Ed., Pennsylvania State University

P. DAVID LOTT, Professor — Elementary Education
B.S., Indiana University of Pennsylvania; M.Ed., D.Ed., Pennsylvania State University

ALWYN LOUDEN, Assistant Professor — Sociology-Anthropology
B.A., University of Wisconsin; M.Ed., University of Pittsburgh

JOANNE P. LOVETTE, Associate Professor — Art
B.S., Indiana University of Pennsylvania; Ed.M., Pennsylvania State University

ONEIDA I. LOZADA, Instructor — Foreign Languages
Bachelor in Letters and Sciences, Instituto Pre-Universitario, Havana, Cuba; Doctor En Pedagogia, University of Havana

A. LYNNE LUCAS, Assistant Professor — Library
B.S., M.L.S., University of Pittsburgh

BEVERLY J. LUCAS, Associate Professor — Health and Physical Education
B.S., West Chester State College; M.Ed., Pennsylvania State University

JOHN E. LUCAS, Assistant Professor — Library
B.S., M.L.S., University of Pittsburgh

VANNIS A. LUCAS, Assistant Professor — Home Economics
A.B., Bridgewater College; M.S., Virginia Polytechnical Institute

DOROTHY F. LUCKER, Professor — English
A.B., Ph.D., University of Texas; A.M., Columbia University

RONALD LUNARDINI, Instructor — Student Affairs
B.S., Indiana University of Pennsylvania; M.Ed., Duquesne University

SANDRA JOYCE LYNN, Instructor — Home Economics
B.S., University of Tennessee, M.S., Auburn University

DONALD M. MacISAAC, Associate Professor — Learning Resources
A.B., M.S., Syracuse University

CHARLES R. MADERER, Associate Professor — Mathematics
B.A., Yale University; M.A.T., Brown University

RICHARD D. MAGEE, Professor — Chairman, Department of Psychology
B.A., M.A., Ph.D., Temple University

RICHARD S. MAGEE, Instructor — Biology
B.A., Pennsylvania State University

CHARLES MAHAN, Assistant Professor — English
A.B., Marshall; M.A., University of Kentucky

DONALD C. MAHAN, Assistant Professor — Business Education
B.S., M.Ed., Indiana University of Pennsylvania

W. DELIGHT MALITSKY, Associate Professor — Music
B.A., University of Hawaii; M.A., Manhattan School of Music

MICHAEL R. MALKIN, Associate Professor — English
A.B., M.A., Ph.D., Tufts University

KATHERYNE MALLINO, Associate Professor — Library
B.S., Clarion State College; M.S.L.S., Drexel Institute of Technology

JAMES H. MAPLE, Associate Professor — Computer Science
B.S., California State College; M.A., Bowling Green State University

DALE P. MARCHAND, Instructor — Assistant to the Academic Vice-President
B.S., Point Park College

IRWIN MURRY MARCUS, Professor — History
B.S., Pennsylvania State University; M.A., Ph.D., Lehigh University

RONALD L. MARKS, Professor — Chemistry
B.S., Lock Haven State College; M.Ed., Ed.D., Pennsylvania State University

GRACE MARLIN, Instructor — University School
B.S., M.Ed., Indiana University of Pennsylvania

ARTHUR H. MARTEL, Assistant Professor — Economics
B.A., St. Anselm's, Manchester, New Hampshire; M.A., University of Massachusetts

LILLIAN G. MARTIN, Associate Professor — University School
B.S., Slippery Rock State College; M.Ed., Pennsylvania State University

ROBERT L. MARX, Instructor — Assistant Dir. of Campus Physical Planning
B.S., M.A., Indiana University of Pennsylvania

JOSEPH M. MASTRO, Associate Professor — History
B.A., Westminster College; M.E., University of Pittsburgh

JOHN K. MATOLYAK, Assistant Professor — Physics
B.S., St. Francis College, Loretto, Pennsylvania; M.S., University of Toledo

GEORGE M. MATOUS, Associate Professor — Physics
B.S., St. Mary's University, San Antonio, Texas; Ph.D., University of Notre Dame

DANIEL V. MATTOX, JR., Associate Professor — Chairman, Learning Resources & Mass Media
B.S., M.Ed., Ph.D., Pennsylvania State University

RICHARD D. McAFOOSE, Associate Professor — Business Management
B.S., Indiana University of Pennsylvania; Litt.M., University of Pittsburgh

DOYLE RICHARD McBRIDE, Associate Professor — Mathematics
B.S., Defiance College; M.A.T., Indiana University, Bloomington, Indiana

RONALD L. McBRIDE, Associate Professor — Mathematics
B.S., M.A., Bowling Green State University; Ph.D., University of Oklahoma

MICHAEL A. McCAFFREY, Assistant Professor — Business Management
B.S., Penn State; MBA, University of Pennsylvania

C. ELIZABETH McCAULIFF, Professor — Chm., Health & Phys. Ed. — Women
B.A., State University of Iowa; M.Ed., D.P.E., Springfield College

WILLIAM McCAVITT, Associate Professor — Coordinator of Radio & TV, Instructional Resources Center
B.S., Shippensburg State College; M.S., Syracuse University

ROBERT E. McCLAY JR., Associate Professor — Safety Sciences
B.S., Bucknell University; M.B.A., American University

A. RICHARD McCLURE, Assistant Professor — Business
B.S., M.Ed., Indiana University of Pennsylvania

DONALD S. McCLURE, Associate Professor — English
A.B., Kalamazoo College; M.A., Western Michigan University; Ph.D., Vanderbilt University

FREDERICK E. McCOID, Associate Professor — Military Science
B.S., Indiana State College

RONALD E. McCOY, Associate Professor — Mathematics
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh; D.Ed., Pennsylvania State University

CLEO McCRACKEN, Associate Professor — Dean of Women
B.S., Utah State University; M.Ed., Syracuse University

RONALD McCULLOCH, Instructor — Learning Resources
B.A., St. Leo College; M.Ed., Boston University

DONALD C. McFEELY, Associate Professor — Elementary Education
B.S., M.Ed., California State College; Ph.D., University of Maryland

FRANCIS G. McGOVERN, Professor — Dean, School of Arts & Sciences
B.S., Providence College; M.B.A., Boston University; Ph.D., Ohio State University

VICTOR D. McGUIRE, JR., Assistant Professor — Criminology
B.S., University of Nebraska; M.P.A., University of Georgia

DONALD R. McKELVEY, Professor — Chemistry
B.S., New Mexico Institute of Mining and Technology; Ph.D., Carnegie-Mellon University

JOHN J. McMANMON, Professor — English
B.A., Notre Dame; M.A., Holy Cross and Notre Dame; Ph.D., University of Chicago

MARK E. McNABB, Assistant Professor — Criminology
B.A., M.A., Adams State College

PATRICK J. McNAMARA, Associate Professor — Physics
B.S., M.S., University of Detroit

C. DAVID McNAUGHTON, Professor — Music
A.B., Dickinson College; M.A., Ph.D., New York University

DONALD S. McPHERSON, Assistant Professor — Assistant Dean of Men
B.A., M.A., Indiana University of Pennsylvania

LAWRENCE F. McVITTY, Professor — Art
B.S., Edinboro State College; M.A., University of Pittsburgh; D.Ed., Pennsylvania State University

BRUCE A. MEADOWCROFT, Professor — Educational Psychology
B.Ed., Duquesne University; M.Ed., Ed.D., University of Pittsburgh

RICHARD P. MEASE, Associate Professor — Special Education
B.S., Bloomsburg State College; M.S., Pennsylvania State University

CRUZ MENDIZABAL, Professor — Foreign Languages
Licenciado en Filosofia y Letras, Doctor en Filosofia y Letras, Universidad Javeriana, Bogota (Colombia)

ROBERT E. MERRITT, Associate Professor — Biology
B.A., New York State College for Teachers; M.S., Cornell University

JOHN E. MERRYMAN, Associate Professor — Foundations of Education
B.A., M.A., Bob Jones University; M.Ed., University of Pittsburgh; Ph.D., University of Pittsburgh

JANE S. MERVINE, Professor — History
B.A., Hood College; M.A., University of Michigan

PETER F. METARKO, Instructor — Associate Director of Admissions
B.S., Northern Michigan University and Mansfield State

AREND K. L. MIHM, Associate Professor — Germanic & Slavic Languages
Universitat Munchen; Universitat Koln; Ph.D., Universitat of Hamburg, Germany

EDWARD MILEFF, Professor — Health and Physical Education
B.S., University of Oklahoma; M.S., Florida State University; Ed.D., Boston University

JAMES G. MILL, JR., Assistant Professor — Health and Physical Education
B.S., Slippery Rock State College; M.Ed., Temple University

ARTHUR R. MILLER, Assistant Professor — Geography
B.S., Indiana University of Pennsylvania; M.R.C.P., University of Oklahoma

BENJAMIN T. MILLER. Associate Professor — Chairman, Art
B.F.A., University of Denver; M.F.A., Carnegie-Mellon University

JAMES H. MILLER, Associate Professor — Biology
A.B., Kansas State College; M.A., Stanford University

LARRY CARL MILLER, Associate Professor — History
B.A., Hunter College; M.A., Ph.D., Northwestern University

LAURABEL H. MILLER, Assistant Professor — English
B.S., M.Ed., Indiana University of Pennsylvania

VINCENT P. MILLER, JR., Professor — Geography
B.S., Muskingum College; M.S., Pennsylvania State University; Ph.D., Michigan State University

ROBERT E. MILLWARD, Assistant Professor — Elementary Education
Bs.Ed., California State College; M.Ed., Duquesne University

GEORGE R. MILTZ, Assistant Professor — Foreign Languages
A.B., Xavier University; M.A., University of Cincinnati

SHARON MONTGOMERY, Associate Professor — Philosophy
B.A., M.A., Ph.D., University of Pennsylvania

ARCHIE F. MOORE, Assistant Professor — Health and Physical Education
B.S., M.S., Springfield College

EDGAR W. MOORE, Associate Professor — History
B.A., M.A., University of Wisconsin, Milwaukee

ROBERT N. MOORE, Associate Professor — Biology
B.S., Clarion State College; M.S., Bucknell University

BERNARD A. MOREAU, Assistant Professor — Business Education
B.S., M.Ed., Indiana University of Pennsylvania

JUDITH A. MOORHEAD, Instructor — Ass't. Dir. of Public Relations
A.B., Bucknell University

WALLACE F. MORRELL, Associate Professor — Mathematics
B.S., M.Ed., University of Pittsburgh; M.S., Clarkson College of Technology

MORTON MORRIS, Professor Chairman, Department of Special Education
A.B., City University of New York; M.A., New York University; Ed.D., Columbia University

RUTH S. MORRIS, Instructor Business Education
B.A., Penn State University; M.A., Bucknell University

ROBERT L. MORRIS, Professor Chairman, International Studies
B.A., Lycoming College; M.A., Columbia University; Ph.D., West Virginia University

ROY A. MOSS, Associate Professor Associate Director of Career Services
B.S., Thiel College, M.Ed., University of Pittsburgh

EDWARD R. MOTT, Professor Elementary Education
B.S., Clarion State College; Ed.M., Ed.D., Pennsylvania State University

JOANNE MUELLER, Associate Professor Mathematics
B.S., M.S., Montana State University

GEORGE W. MURDOCH, Professor Vice President for Finance
B.S., Shippensburg State College; M.Ed., University of Pittsburgh; Ph.D., George Washington University

J. ROBERT MURRAY, Professor Director, Instructional Resources Center
B.S., Edinboro State College; M.Ed., D.Ed., Pennsylvania State University

MARIAN A. MURRAY, Professor Chariman, Department of Nursing
B.S., M.Litt. in Nursing, University of Pittsburgh; Ph.D., University of Pittsburgh

ANTHONY J. NANIA, Associate Professor English
B.A., Northland College (Wis.); M.A. Marquette University

ANTHONY J. NASTASE, Instructor Biology
B.S., M.Ed., Indiana University of Pennsylvania

WILLIAM A. NEAL, Assistant Professor Health and Physical Education
B.S., M.A., The George Washington University

DEANNA J. NELSON, Assistant Professor Chemistry
B.S., Gustavus Adolphus College; Ph.D., Indiana University

RUSSEL C. NELSON, Professor Music
B.M.E., M.M., Northwestern University; Ph.D., University of Michigan

GINI G. NEWELL, Instructor Special Education
B.S., M.Ed., Indiana University of Pennsylvania

ESKO E. NEWHILL, Professor Sociology-Anthropology
A.B., M.A., Ph.D., Syracuse University

JAMES NIX, Assistant Professor Director, Cultural Affairs
B.S., Indiana University of Pennsylvania; M.A., Northwestern University

JOHN J. NOLD, Assistant Professor Director, Computer Center
B.S., Clarion State College; M.B.A., Duquesne University

MARILYN E. NOZ, Associate Professor Physics
B.A., Marymount College; M.S., Ph.D., Fordham University

CARL P. OAKES, Associate Professor Mathematics
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

EVERETT F. OESTERLING, JR., Professor Allied Health
B.S., Juniata College; M.D., Thomas Jefferson University

ANJA H. OLIN-FAHLE, Associate Professor Sociology-Anthropology
B.A., Friends University; M.A., Haverford College

JAMES M. OLIVER, Professor History
B.S., University of Arkansas; M.A., Ph.D., University of Missouri

GARY JAMES OLMSTEAD, Assistant Professor Music
B.S., University of Michigan; M.F.A., Ohio University

IVO OMRCANIN, Professor — Foreign Languages
A.B., Urbanian University; Ph.D., Gregorian University; L.L.B., Sorbonne J.S.D., Trieste University; J.C.D., Catholic University, Paris, France

MARGARET S. OMRCANIN, Professor — English
A.B., M.A., University of Kentucky; Ph.D., University of Illinois

LUDO op de BEECK, Associate Professor — Foreign Languages
B.A., M.A., Belgium Ministry of Education

HAROLD S. ORENDORFF, Professor — Music
A.B., Central Washington State College; M.A., Ed.D., Teachers College, Columbia University

DOROTHY ANN PALMER, Associate Professor — Political Science
B.S., Indiana University of Pennsylvania; M.A., Miami University (Ohio)

LARRY R. PANAIA, Instructor — Men's Health & Physical Education
B.S., M.A., Indiana University of Pennsylvania

FREDERICK R. PARK, Associate Professor — Geoscience
B.S., Franklin and Marshall College; M.S., University of Pittsburgh

ROBERT A. PATSIGA, Professor — Chemistry
B.S., Geneva College; Ph.D., State University College of Forestry, Syracuse University

PATRICIA L. PATTERSON, Associate Professor — Business Education
B.S., Grove City College; Ed.M., Pennsylvania State University

GARY W. R. PATTON, Professor — Psychology
B.S., Purdue University; M.S., Ph.D., Tufts University

JAMES EDWARD PAYNE, Associate Professor — Geography
A.B., A.M., University of North Carolina

GERARD C. PENTA, Assistant Professor — Foundations of Education
B.A., Montclair State College; Ed.M., Rutgers University

LAURENCE JOHN PERKINS, Assistant Professor — Music
B.S., Northern State College, Aberdeen, South Dakota; M.M., Eastman School of Music

DANIEL PERLONGO, Assistant Professor — Music
B.M., M.M., University of Michigan

SUZANNE PERLONGO, Assistant Professor — Music Library
B.M., North Park College, Chicago; M.M., M.L.S., University of Michigan

EVERETT J. PESCI, Professor — Counseling and Guidance
B.S., M.Ed., Indiana University of Pennsylvania; Ph.D., West Virginia University

JOSEPH ALEXANDER PETERS, Associate Professor — Mathematics
B.S., St. Joseph's College; M.S., University of Illinois

JUNE K. PHILLIPS, Associate Professor — Romance & Classical Language
B.A., University of Pittsburgh; M.A., Ohio State University

JERRY L. PICKERING, Associate Professor — Biology
B.S., Iowa State University; M.S., Ph.D., Rutgers State University

DENTON F. PILLION, Associate Professor — Business Management
A.B., Stonehill College, Massachusetts; Ed.M., Worcester State College; Boston College; Clark University

EDWARD E. PLATT, Professor — Political Science
B.A., M.A., Ph.D., University of Connecticut

MARK A. PLIVELIC, Associate Professor — Business Management
B.S., Duquesne University: M.Litt., University of Pittsburgh

RUTH PODBIELSKI, Associate Professor — Health and Physical Education
B.S., Slippery Rock State College; M.Ed., University of Pittsburgh

NANCY E. POLAND, Associate Professor — Music
B.A., Mt. Holyoke College; M.A., M.M., University of Michigan

JOHN A. POLESKY, Associate Professor — Business Education
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh

ROMAYNE POUNDS, Associate Professor — Special Education
B.S., M.Ed., Indiana University of Pennsylvania

PAUL ANTHONY PRINCE, Associate Professor — Geoscience
B.S., East Stroudsburg State College; M.A., Clark University; Ed.M., Harvard University

CLARA ELDENA PURCELL, Assistant Professor — Home Economics
B.S., M.S., Purdue University

JOHN P. QUIRK, Associate Professor — Educational Psychology
B.A., M.A., Fairleigh Dickinson University; D.Ed., University of Georgia

ROBERT L. RADAKER, Assistant Professor — Psychology
B.S.Ed., Slippery Rock State College; M.Ed., Westminster College

DOWNEY RAIBOURN, Associate Professor — Sociology-Anthropology
A.B., M.A., Indiana University (Bloomington)

DAVID L. RAMSEY, Instructor — Physics
B.A., Washington and Jefferson College

CHANCY R. RAWLEIGH, Associate Professor — Sociology-Anthropology
A.B., Lycoming College; S.T.B., Boston University School of Theology; M.A., Ph.D., Syracuse University

RICHARD E. RAY, Associate Professor — English
B.S., M.Ed., Indiana University of Pennsylvania

CLARICE K. REBER, Instructor — Special Education
B.S., Northwestern University; M.S., University of Michigan

JAMES C. REBER, Assistant Professor — Mathematics
B.A., Indiana Central College, Indianapolis; M.A., Duke University; Ph.D., Duke University

CHARLES E. RECESKI, Instructor — Inventory Control Officer
B.S., Lycoming College; M.Ed., Indiana University of Pennsylvania

DANIEL G. REIBER, Professor — Physics
A.B., Franklin and Marshall College; M.S., Pennsylvania State University

JOHN WALLING REID, Professor — Psychology
B.A., Swarthmore College; M.A., University of Pennsylvania; Ed.D., Columbia University

L. LEON REID, Professor — Special Education & Clinical Services
B.A., Bridgewater College; M.A., Marshall University; Ph.D., University of Texas

WILLIAM A. REIFEL, Associate Professor — Business Management
A.B., Colby College; M.P.A., New York University Graduate School; J.D., Boston University Law School

MILDRED M. REIGH, Associate Professor — Mathematics
B.A., Juniata College; M.S., University of Illinois; M.Ed., Pennsylvania State University

JAMES B. REILLY, Associate Professor — Elementary Education
B.S., Waynesburg College; M.A., Ed.D., West Virginia University

WILLIAM L. RETTIG, Associate Professor — Mathematics
B.S., California State College; M.S., Ohio State University; Ph.D., Ohio State University

DAVID M. RIBAN, Associate Professor — Physics
B.S., Northern Illinois University; M.A., University of Michigan; M.S., Ph.D., Purdue University

WILLIS J. RICHARD, Assistant Professor — Economics
B.A., Berea College; M.A., Iowa State University

MAURICE L. RIDER, Professor — English
B.S., M.A., Ph.D., Ohio State University

J. MERLE RIFE, Professor — History
A.B., Muskingum College; M.A., Ph.D., Ohio State University

WANDA RIFE, Assistant Professor — Library
B.S., Ohio State University; M.S.L.S., Case Western Reserve University

ARLENE RISHER, Assistant Professor — Business Education
A.B., Mount Union College; M.Ed., University of Pittsburgh

ROBERT H. RITTLE, Associate Professor — Psychology
B.A., Lebanon Valley College; M.A., Ph.D., Kent State University

JOSEPH S. RIZZO, Associate Professor — Elementary Education
B.S., Wilkes College; M.A., Newark State; Ph.D., University of Maryland

DONALD J. ROBBINS, Assistant Professor — Business Management
B.S., Indiana University of Pennsylvania

RICHARD D. ROBERTS, Associate Professor — Physics
B.S., M.S., Pennsylvania State University

BERNARD ROFFMAN, Associate Professor — Foreign Languages
B.S., New York University; M.A., Fordham University

ROSALY ROFFMAN, Instructor — English
B.A., City College of New York; M.A., University of Hawaii

DOUGLAS A. ROSS, Associate Professor — Psychology
B.A., Lebanon Valley College; M.A., Bowling Green State University; Ph.D., Lehigh University

FRANK ROSS, Associate Professor — Art
B.F.A., M.F.A., Carnegie-Mellon University

DAVID E. ROTIGEL, Associate Professor — Foundations of Education
B.S., Wayne State University; M.Ed., University of Toledo; Ed.D., University of Illinois

PHYLLIS ROUMM, Associate Professor — English
B.S., M.Ed., Indiana University of Pennsylvania

PHILLIP A. RUFFNER, Instructor — English
B.S., Clarion State College; M.Ed., Indiana University of Pennsylvania

LOIS B. RUPERT, Associate Professor — Home Economics
B.S., Pennsylvania State University; M.S., Carnegie-Mellon University

WAYNE K. SAGER, Assistant Professor — Military Science
B.S., Pennsylvania State University

JOHN R. SAHLI, Professor — History
A.B., Geneva College; M.Ed., M.A., Ph.D., University of Pittsburgh

WILLIAM E. SALESSES, Professor — Associate Dean, School of Education
B.A., St. Paul Seminary; M.A., Ph.D., Claremont Graduate School, California

PATRICIA C. SAMSEY, Assistant Professor — English
A.B., Smith College, Northhampton; M.A., Oklahoma State University

LOIS D. SARGENT, Instructor — Psychology
B.S., Indiana University; M.Ed., Indiana University of Pennsylvania

NORMAN W. SARGENT, Professor — Learning Resources & Mass Media
A.B., Hiram College; M.A., Ohio State University; Ed.D., Indiana University

NICOLO A. SARTORI, Assistant Professor — Music
B.M., Conservatory'e Pollini of Padova, Italy; M.M., University of Michigan

ROBERT H. SAYLOR, Professor — Counselor Education
B.S., Juniata College; M.Ed., Ed.D., Pennsylvania State University

EUGENE F. SCANLON, Professor — Special Education
B.Ed., Duquesne University; M.Ed., University of Pittsburgh; D.Ed., Pennsylvania State University

R. THOMAS SCHAUB, Assistant Professor — Philosophy
B.A., M.A., Acquinas Institute; S.S.L., Pontifical Biblical Commission, Rome

KATHLEEN D. SCHAUM, Assistant Professor — Food and Nutrition
B.S., Indiana University of Pennsylvania; M.S., Ohio State University

MARTHA S. SCHEEREN, Assistant Professor — Library
B.A., Pennsylvania State University; B.S., Indiana University of Pennsylvania; M.S.L.S., University of Pittsburgh

CARL W. SCHNEIDER, Associate Professor — Psychology
B.A., M.A., Ph.D., Michigan State University

DOROTHY N. SCHROCK, Assistant Professor — Business Education
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh

GOULD F. SCHROCK, Professor — Biology
B.S., M.Ed., Indiana University of Pennsylvania; Ph.D., University of Chicago

JOHN H. SCROXTON, Associate Professor — Chemistry
B.A., M.S., Alfred University

GEORGE K. SEACRIST, Associate Professor — English
B.S., Indiana University of Pennsylvania; M.Litt., University of Pittsburgh

C. DONALD SEAGREN, Associate Professor — Registrar
B.A., Thiel College; M.A., University of Pittsburgh; D.Ed., Pennsylvania State University

ROBERT C. SEELHORST, Professor — Art
B.S., Indiana University of Pennsylvania; M.Ed., Ed.D., Pennsylvania State University

FREDERICK A. SEHRING, Assistant Professor — Assistant Registrar
B.A., M.Ed., University of Pittsburgh

FREDERICK W. SEINFELT, Professor — English
A.B., A.M., Ph.D., Pennsylvania State University

DALE M. SHAFER, Professor — Mathematics
B.S., Kutztown State College; M.A., Columbia University; Ph.D., University of Oklahoma

RONALD G. SHAFER, Assistant Professor — English
B.S., M.A., Indiana University of Pennsylvania

CATHERINE P. SHAFFER, Assistant Professor — English
A.B., Pennsylvania State University; A.M., Gettysburg College

EDWARD D. SHAFFER, Associate Professor — Counselor Education
B.S., Ed.M., University of Pittsburgh

ESTHER SHANE, Assistant Professor — Speech and Hearing
B.A., Westminster College; M.S., West Virginia University

MILDRED NOBLE SHANK, Associate Professor — Educational-Psychology
B.S., Indiana University of Pennsylvania; M.A., Columbia University

JAMES O. SHANNON, Assistant Professor — Criminology
B.S.Ed., University of Pittsburgh; M.S., Police Administration, Washington State University

SATYA SHARMA, Associate Professor — Home Economics
B.A., Lahore College for Women, India; M.S., Ph.D., Ohio State University

MAHER Y. SHAWER, Professor — Mathematics
B.S., Teacher College, Cairo; M.S., University of Wisconsin; Ph.D., University of Oklahoma

LINDA S. SHEARER, Assistant Professor — Home Economics
B.S., Pennsylvania State University; M.S., Cornell University

ELWOOD B. SHEEDER, Professor — Dean, School of Business
B.S., Indiana University of Pennsylvania; Ed.M., Ed.D., University of Pittsburgh

JACK L. SHEPLER, Professor — Mathematics
B.A., Roberts Wesleyan College; M.A., San Diego State College; Ph.D., University of Wisconsin

DAVID L. SHIELDS, Associate Professor — Foreign Languages
A.B., University of Pittsburgh; M.A., Middlebury College

KENNETH LEE SHILDT, Assistant Professor — Business Management
B.S., Shippensburg State College; M.S., Pennsylvania State University

DANIEL C. SHIVELY, Associate Professor — Library
A.B., Princeton University; M.S.L.S., Drexel Institute of Technology

SHIRLEY JEAN SHPARGEL, Instructor — Consumer Services
B.S., Stout State University; M.A., Michigan State University

RONALD E. SIMKINS, Associate Professor — Food and Nutrition
B.S., Indiana University of Pennsylvania; M.Ed., Westminster College

HERMAN L. SLEDZIK, Associate Professor — Athletic Director
B.S., M.Ed., Pennsylvania State University

JEAN J. SLENKER, Associate Professor — Art
B.S., Indiana University of Pennsylvania; M.A., Professional Diploma, Teachers College, Columbia University

ROBERT EUGENE SLENKER, Associate Professor — Art
B.S., Indiana University of Pennsylvania; M.A., Columbia University; Professional Diploma, Teachers College, Columbia University

EDWARD L. SLONIGER, Professor — Health and Physical Education
B.S., Slippery Rock State College; M.S., Ph.D., University of Illinois

BERT A. SMITH, Associate Professor — Political Science
B.A., University of Nebraska; M.A., University of Missouri

EDWIN SMITH, Professor — Mathematics
B.S., King's London University; M.A., University of Nevada; Ed.D., Ball State University

HELENA M. SMITH, Professor — English
B.S., Indiana University of Pennsylvania; M.Ed., Ph.D., Pennsylvania State University

JOHN THOMAS SMITH, JR., Associate Professor — Educational Psychology
B.S., M.Ed., Ph.D., University of Pittsburgh

WILLIAM R. SMITH, Professor — Mathematics
B.S., Pennsylvania State University; Ed.M., Harvard University

W. WAYNE SMITH, Professor — History
B.S., Salisbury State College; M.A., Ph.D., University of Maryland

MARIE E. SNEAD, Associate Professor — Library
B.S., Geneva College; B.S.L.S., Syracuse University; A.M.L.S., University of Michigan

HAROLD M. SOMMER, Assistant Professor — Foreign Languages
B.A., Wabash College; M.Ed., Miami University; Ed.D., University of Georgia

MARGARET SOMMER, Assistant Professor — Consumer Services
B.S., M.S.H.E., Purdue University

ANTHONY J. SORENTO, Associate Professor — Foreign Languages
B.A., Pennsylvania State University; M.A., Middlebury College, Vermont; Doctor of Romance Philology, University of Madrid

ELWOOD R. SPEAKMAN, Associate Professor — Mathematics
B.A., Eastern Nazarene College; M.A., Bowling Green State University; M.A.T., Brown University

LESLIE S. SPENCER, Assistant Professor — Business Education
B.S., M.B.A., Syracuse University

JOSEPH B. SPIEKER, Associate Professor — Foreign Languages
B.A., LaSalle College; M.A., University of Pennsylvania; Ph.D., Catholic University

GEORGE L. SPINELLI, Professor — Chairman, Department of Counselor Education
B.S., Ed.M., Ed.D., University of Pittsburgh

WILLIAM M. SRSIC, Asst. Professor — Assistant Director, Financial Aid
B.S., M.Ed., Edinboro State College

KATHERINE L. STAHLMAN, Instructor — Food and Nutrition
B.S., Slippery Rock State College; B.S., Indiana University of Pennsylvania; M.S., Case Western Reserve University

JAMES G. STAPLES, Associate Professor — Music
B.M., M.M., Florida State University; D.M.A., Eastman School of Music

MARTIN L. STAPLETON, Professor — Biology
B.S., Kutztown State College; M.A., Lehigh University; Ed.D., Pennsylvania State University

RONALD A. STEINER, Associate Professor — Associate Director of Libraries
B.A., University of Dubuque; M.S.L.S., Case Western Reserve University

HERMAN E. STENGER, Assistant Professor — Criminology
A.B., Lycoming College; S.T.B., Wesley Theological Seminary

BETTY J. STEVENS, Instructor — Consumer Services
B.S., Florida State University

CHARLES B. STEVENSON, Associate Professor — Business Management
B.A., M.A., George Washington University

MERLE STILWELL, Professor — Mathematics
B.S., Mansfield State College; M.A., Columbia University; Ph.D., Cornell University

LLOYD K. STIRES, Associate Professor — Psychology
B.A., Drew University; Ph.D., Duke University

ROBERT J. STONEBRAKER, Assistant Professor — Economics
B.A., University of Maryland

NORMAN STORM, Assistant Professor — Ass't. to Dir., Punxsutawney
B.S., M.Ed., Indiana University of Pennsylvania

GEORGE A. STOUFFER, JR., Professor — Dean, School of Education
B.S., Shippensburg State College; Ed.M., Ed.D., University of Pittsburgh

RICHARD M. STRAWCUTTER, Professor — Chairman, Allied Health Professions
B.S., Indiana University of Pennsylvania; A.M., Columbia University

DONNA L. STREIFTHAU, Associate Professor — Chairman Consumer Services
B.S., M.Ed., Miami University; Ph.D., Ohio State University

ROBERT S. STROCK, Assistant Professor — Business Management
B.S., Geneva College; M.Ed., Shippensburg State College

ALVIN J. STUART, Professor — Elementary Education
B.S., M.Ed., University of Pittsburgh; Ph.D., Ohio University

ELEANOR B. SUHRIE, Assistant Professor — Nursing
B.S.N., M.S.N., University of Pittsburgh

CONNIE J. SUTTON, Assistant Professor — Geoscience
B.A., M.Ed., Indiana University of Pennsylvania

LOUIS R. SUTTON, Professor — Health and Physical Education
B.S., Slippery Rock State College; M.Ed., University of Pittsburgh; Ed.D., West Virginia University

CRAIG G. SWAUGER, Professor — Chairman, Department of English
B.S., Indiana University of Pennsylvania; M.Litt., Ed.D., University of Pittsburgh

FORD HARRIS SWIGART, JR., Professor — English
B.A., Otterbein College; M.A., Ph.D., University of Pittsburgh

AUGUSTA SYTY, Associate Professor — Chemistry
B.S., Ph.D., University of Tennessee

STANFORD L. TACKETT, Professor — Chemistry
B.S., Ph.D., Ohio State University

LEONARD P. TEPPER, Assistant Professor — Geography
B.A., California State College; Ph.D., University of Pittsburgh

EUGENE F. THIBADEAU, Associate Professor — Foundations of Education
A.B., M.A. (Philosophy), M.A. (Education), Ph.D., New York University

BEATRICE F. THOMAS, Assistant Professor — Business Education
B.S., Ed.M., University of Pittsburgh

RAYMOND L. THOMAS, Professor — English
B.S., Indiana University of Pennsylvania; A.M., Columbia University; Ph.D., Pennsylvania State University

RONALD W. THOMAS, Assistant Professor — Dean of Men
B.S., Bloomsburg State College; M.Ed., Edinboro State College

RICHARD E. THORELL, Assistant Professor — Music
B.M., Eastman School of Music; M.Ed., University of Rochester

GORDON F. THORNTON, Assistant Professor — Psychology
B.A., Gettysburg College; M.S., Ohio University

GERALD L. THORPE, Associate Professor — Political Science
B.A., Wayne State University; M.A.T., Harvard University

DENNIS D. TIGER, Professor — Chairman, Business & Distributive Ed.
B.S., Indiana University of Pennsylvania; M.Ed., D.Ed., University of Pittsburgh

WARNER E. TOBIN, Professor — Director of University School
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh; D.Ed., Penn State

HOWARD E. TOMPKINS, Professor — Chairman, Computer Science
B.A., Swarthmore College; M.S., Ph.D., University of Pennsylvania

ELIZABETH TROXELL, Associate Professor — Mathematics
A.B., Gettysburg College; M.A.T., Indiana University, Bloomington; M.Ed., Pennsylvania State University

J. DAVID TRUBY, Professor — English
B.A., M.A., Ph.D., Pennsylvania State University

LAWRENCE R. TUCKER, Associate Professor — Health and Physical Education
B.S., Bridgewater College; M.S., Ohio State University

HENRY H. VALLOWE, Professor — Biology
B.S., Indiana University of Pennsylvania; M.S., Ph.D., University of Chicago

LEON D. VANDECREEK, Associate Professor — Psychology
A.B., Calvin College; M.A., Bowling Green; Ph.D., University of South Dakota

MURRAY M. VARNER, Assistant Professor — Business & Distributive Education
B.S., Indiana University of Pennsylvania; M.E., University of Pittsburgh

RICHARD VEXLER, Assistant Professor — Sociology-Anthropology
B.A., M.A., University of Pittsburgh

LESLIE VICKERS, JR., Assistant Professor — Special Education
B.S., M.Ed., Indiana University of Pennsylvania

ROBERT J. VISLOSKY, Professor — Art
B.S., Edinboro; Ed.M., D.Ed., Pennsylvania State University

JACOB U. VOELKER, Associate Professor — Foreign Languages
B.A., St. Joseph's; M.A., University of Notre Dame

DOROTHY C. VOGEL, Professor — History
B.A., Marymount College; M.A., Fordham University; Ph.D., New York University

DOROTHY B. VOLM, Instructor — Library
A.B., McPherson College, McPherson, Kansas; M.L.S., University of Pittsburgh

EVA VOUKLIZAS, Associate Professor — Music
B.M., Syracuse University; M.M., Indiana University

JAMES A. WADDELL, Assistant Professor — English
A.B., Berea College; M.A., University of North Carolina

RICHARD F. WAECHTER, Professor — Biology
B.S., Bloomsburg State College; M.S., Bucknell University; D.Ed., Pennsylvania State University

DONALD A. WALKER, Professor — Chairman, Department of Economics
A.B., Southwest Texas State College; M.A., University of Texas; Ph.D., Harvard

RUTH I. WALTERS, Assistant Professor — Geography
B.S., Indiana University of Pennsylvania; M.S., Ph.D., University of Tennessee

JOANN E. WALTHOUR, Assistant Professor — University School
B.S., Chatham College; M.M.E., University of Pittsburgh

GEORGE B. WALZ, Associate Professor — Psychology
B.S., Pennsylvania State University; M.S., Ph.D., Lehigh University

STEPHEN B. WARE, Associate Professor — Economics
B.A., Ohio Wesleyan University

HELEN LOUISE WARREN, Assistant Professor — English
B.S., M.Ed., Indiana University of Pennsylvania

ROBERT O. WARREN, Associate Professor — Vice President of University Services
B.S., Indiana University of Pennsylvania; M.Litt., University of Pittsburgh

JANE WASHBURN, Assistant Professor — Counselor Education
B.S., University of Pittsburgh; M.Ed., Indiana University of Pennsylvania

WILLIAM M. WASKOSKIE, Associate Professor — Biology
B.A., St. Francis College, Loretto, Pennsylvania; M.Litt., University of Pittsburgh

JOHN G. WATTA, Assistant Professor — English
B.S., Indiana University of Pennsylvania; M.Litt., University of Pittsburgh

ROBERT A. WEAVER, Associate Professor — Military Science
B.G.E., University of Omaha; M.A., Hampton Institute

CALVIN E. WEBER, Associate Professor — Music
B.S., M.S., University of Pennsylvania; Ed.D., University of Illinois, Urbana

CHARLES E. WEBER, Professor — Geography
B.A., Montclair State College, New Jersey; M.A., Ed.D., Columbia University

WILLIAM F. WEGENER, Assistant Professor — Chairman, Criminology
B.A., A.M., Colorado State College

KATHRYN WELDY, Assistant Professor — English
B.S., Kutztown State College; M.A., Middlebury College

NED O. WERT, Assistant Professor — Art
B.S., Indiana University of Pennsylvania; M.Ed., Pennsylvania State University

JACK R. WESTWOOD, Assistant Professor — Mathematics
B.S., Indiana University of Pennsylvania; M.S., Burkwell University

ROBERT L. WHITMER, Assistant Professor — Foreign Languages
B.S., West Virginia University; M.A., Ohio State University

DENNIS W. WHITSON, Assistant Professor — Physics
B.S., North Dakota State University; M.S., University of Minnesota; Ph.D., University of Pittsburgh

JAMES HERBERT WILDEBOOR, Assoc. Prof. — Interim Chairman, Music
A.B., Ottawa University; M.M.E., University of Kansas

GOERGE T. WILEY, Professor — Director, Graduate Research
A.B., Oberlin College; M.A., Ph.D., Western Reserve University

GUY HOLLAND WILLIAMS, III, Instructor — Criminology
B.A., Allegheny College

ROGER N. WILLIAMS, JR., Assistant Professor — Foreign Languages
B.S., Grove City College; M.A., Pennsylvania State University

HALLEY O. WILLISON, JR., Associate Professor — Mathematics
B.S.Ed., Clarion State Teachers College; M.Litt., University of Pittsburgh

EDWARD D. WILSON, Associate Professor — Political Science
B.S., University of Houston; M.A., Ph.D., University of Oklahoma

JAMES C. WILSON, Professor — Counselor Education
B.S., Clarion State College; M.Ed., Duquesne University; Ed.D., University of Pittsburgh

T. KENNETH WILSON, Associate Professor — English
B.A., University of Buffalo

DAVID C. WINSLOW, Professor — Geography
B.A., University of Oklahoma; M.A., University of Nebraska; Ph.D., Clark University

EDWARD G. WOLF, Associate Professor — Library
B.Ed., Duquesne University; M.Letters, University of Pittsburgh; M.S.L.S., Drexel Institute of Technology; Ph.D., University of Pittsburgh

RICHARD E. WOLFE, Professor — Mathematics
A.B., Gettysburg College; M.S., Ph.D., University of Illinois

BETTY LOU WOOD, Instructor — Consumer Services
B.S., Indiana University of Pennsylvania

SUSAN WOOD, Associate Professor — Geography
B.S., M.A., Kent State University

MELVIN R. WOODARD, Professor — Chairman, Department of Mathematics
B.S., Mansfield State College; M.A., University of Illinois; Ed.D., Oklahoma State University

ROBERT L. WOODARD, Professor — Director of Inst. Research
B.S., Syracuse University; M.S., State University of New York, Genesee, New York; Ph.D., Cornell University

ALLEN M. WOODS, Associate Professor — Chairman, Food and Nutrition
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh

DON W. WOODWORTH, Associate Professor — English
B.A., Dartmouth; M.A., Indiana University

DALE W. WOOMER, Professor — Business Education
B.S., M.Ed., D.Ed., Pennsylvania State University

JOHN C. WORZBYT, Associate Professor — Counselor Education
B.S., State University College at Oswego; Ed.M., Ed.D., University of Rochester

HELEN J. WRIGHT, Associate Professor — Nursing
B.S.NE., M.Litt., M.Ph., University of Pittsburgh; M.Ed., Duquesne University

PAUL R. WUNZ, JR., Professor — Chemistry
B.S., M.S., Pennsylvania State University; Ph.D., University of Delaware

JOHN A. YACKUBOSKEY, Assistant Professor — History
B.A., North Georgia College; M.A., Emory University

MYRON M. YAGEL, Associate Professor Special Education & Clinical Services
B.S., M.A., University of Richmond; Ed.D., University of Virginia

JOAN R. YANUZZI, Associate Professor Educational Psychology
A.B., M.A., University of Michigan; Ph.D., Cornell University

ROBERT YARUP, Assistant Professor English
B.S., California State College; M.A., West Virginia University

HAROLD J. YOUCIS, Professor Foundations of Education
B.M.E., Drake University; M.S., Ithaca College; Ed.D., Indiana University

DAVID L. YOUNG, Associate Professor English
B.A., M.A., Kent State University; Ph.D., Ohio State University

MAURICE M. ZACUR, Professor Geography
B.S., Indiana University of Pennsylvania; M.Ed., University of Pittsburgh; D.Ed., Pennsylvania State University

GENO ZAMBOTTI, Assistant Professor Chemistry
B.S., M.Ed., Indiana University of Pennsylvania

CYRIL J. ZENISEK, Professor Biology
B.S., M.S., Ph.D., Ohio State University

GEORGE D. ZEPP, Professor Elementary Education
B.S., Millersville State College; M.Ed., D.Ed., University of Maryland

DONALD N. ZIMMERMAN, Professor Chemistry
B.S., University of Maryland; M.Ed., Pennsylvania State University; Ph.D., West Virginia University

ADJUNCT PROFESSORS — ALLIED HEALTH PROFESSIONS

CLAUS L. ANDERSON
Lecturer in Pulmonary Medicine, School of Inhalation Therapy, The Western Pennsylvania Hospital, Pittsburgh, Pennsylvania; B.S., University of Pennsylvania; M.D., Temple University

ERIC W. DEAN, JR.
Clinical Coordinator, School of Inhalation Therapy, The Western Pennsylvania Hospital, Pittsburgh, Pennsylvania; A.A., Allegheny Community College; B.S., University of Missouri

JOAN A. GROTE
Assistant to the Educational Coordinator, School of Medical Technology, Latrobe Area Hospital, B.S., M.T. (A.S.C.P.)

EDWARD H. HALE
Lecturer in Internal Medicine, School of Inhalation Therapy, The Western Pennsylvania Hospital, Pittsburgh, Pennsylvania; B.S., Tennessee State College; M.S., University of Illinois; M.D., Meharry Medical College

WILLIAM J. HERBERT, III
Assistant Technical Director, School of Inhalation Therapy, The Western Pennsylvania Hospital, Pittsburgh, Pennsylvania A.R.I.T.

NORMA J. HOENSHEL
Educational Coordinator, School of Medical Technology, Latrobe Area Hospital; B.A., M.T. (A.S.C.P.)

WALTER W. JETTER
Director of Pathology Laboratories and School of Medical Technology, Latrobe Area Hospital; M.S. in Medicine, University of Buffalo

ROBERT A. MARTIN
Technical Director, School of Inhalation Therapy, The Western Pennsylvania Hospital, Pittsburgh, Pennsylvania A.R.I.T.

JOHN H. SCOTT
Chief of Pulmonary Medicine and Medical Director, School of Inhalation Therapy, The Western Pennsylvania Hospital, Pittsburgh, Pennsylvania; B.S., Bucknell University; M.D., University of Pittsburgh

ADJUNCT FACULTY – BACCALAUREATE PROGRAM IN NURSING – LATROBE AREA HOSPITAL

JAMES H. TAYLOR — Administrator
A.B., University of Rochester; M.B.A., University of Pittsburgh

MARGARET J. EKLUND — Director of Nursing
B.S., University of Dayton; M.S., Syracuse University

LOIS R. GOODMAN — Director of Dietetics
B.S., Seton Hill College; Member A.D.A.

JOHN R. MAZERO — Medical Director
B.A., M.D., George Washington University

PHILIP W. CURRIE — Chief of Obstetrics
B.S., Mt. Union College; M.D., University of Pennsylvania

RAY G. SARVER — Chief of Pediatrics
A.B., St. Vincent College; M.D., University of Pennsylvania

THOMAS W. MORAN, JR. — Chief of Surgery
B.A., Dartmouth College; M.D., Jefferson Medical College

MELVIN L. SCHWARTZ — Chief of Psychiatry
B.S., University of Pittsburgh; M.D., Jefferson Medical College

JOHN S. PARKER — Chief of Medicine
B.A., Washington & Jefferson College; M.D., University of Buffalo

WILLIAM U. SIPE — Anesthesiologist
B.S., St. Vincent College; M.D., University of Pittsburgh

THOMAS M. SPROCH — Radiologist
B.S., St. Vincent College; M.D., Jefferson Medical College

HAROLD EDISON — Psychiatrist
M.D., University of Pittsburgh

ADJUNCT PROFESSORS – PSYCHOLOGY

JAMES A. BESHAI
Director of Psychology Services at Dixmont State Hospital, Sewickley, Pennsylvania; B.A., American University, Cairo, Egypt; M.S., University of Pennsylvania; Ph.D., University of Kentucky

JAMES KLINEDINST
Director, Indiana County Guidance Center, Indiana, Pennsylvania; B.A., Lebanon Valley College; Ph.D., University of Minnesota

HERBERT I. LEVIT
Director of Psychology at Allegheny General Hospital, Pittsburgh, Pennsylvania; B.A., Ed.M., Ed.D., Temple University

NOEL A. PLUMMER
Woodville State Hospital, Carnegie, Pennsylvania; B.S., Juniata College; M.S., University of Miami; Ph.D., University of Florida

ALAN W. RUSNAK
Director of Training, Psychology Department, Woodville State Hospital, Carnegie, Pennsylvania; B.S., University of Miami; Ph.D., University of Florida

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INDIANA UNIVERSITY OF PENNSYLVANIA

INDIANA, PENNSYLVANIA

BUILDING LOCATION MAP

PREPARED BY
CAMPUS PLANNING & DEVELOPMENT OFFICE
AUGUST 13, 1970

21 BOILER PLANT
50 THE BRANCH
51 BROCE HOUSE
6 CARRIAGE HOUSE
45 CIVIL DEFENSE CENTER
4 CLARK HALL (ADM BLDG)
[illegible] HALL
[illegible] HALL
61 [illegible]
[illegible] HALL
[illegible] FOLGER DINING HALL
54 EDGE SERVICE CENTER
(RECHINI HOUSE)
28 EICHER MAINTENANCE BLDG
15 ELKIN HALL
16 ELKIN HOUSE
6 FISHER AUDITORIUM
22 FLAGSTONE THEATER
56 FOSTER DINING HALL
20 GORDON HALL
27 GRANT HALL
64 HILL HOUSE
2 JOHN SUTTON HALL
21 KEITH HALL
35 LANGHAM HALL
43 LAWRENCE HALL
14 LEININGER HALL
9 LEONARD HALL
40 LEROY HALL
62 LEWIS HOUSE
38 MACK HALL
32 MAINTENANCE GARAGE
30 MARTIN RANGE
8 McELHANEY HALL
63 McFARLAND HOUSE
41 McGREGOR HALL
48 MEMORIAL FIELD HOUSE
47 MILLER STADIUM
66 NEWMAN CENTER
68 OAKLAND HALL
39 PECHAN HEALTH CENTER
51 PIERCE MILITARY HALL
(R O T C)
18 PRATT HALL
(STUDENT AFFAIRS BLDG)
60 RICHARDS HOUSE
69 ROONEY HALL
44 SCRANTON HALL
42 SHAFER HALL
31 SHOP BUILDING
57 SPROWLS HALL (FINE ARTS BLDG)
5 STABLEY LIBRARY
29 STANLEY HOUSE
37 STEWART HALL
26 STONE MANOR
19 STUDENT UNION
3 THOMAS SUTTON HALL
49 TENNIS COURTS
52 TEPEE HOUSE
(LAMPISANO HOUSE)
36 TURNBULL HALL
13 UHLER HALL
34 WAHR HALL
7 WALLER HALL
10 WALSH HALL
12 WEYANDT HALL
17 WHITMYRE HALL
11 WILSON HALL
23 WOMEN'S FORM (PROPOSED)
65 WYOMING HALL
[illegible] GSA OFFICE

4 CLARK HALL (ADM BLDG)
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14 LEININGER HALL
15 ELKIN HALL
16 ELKIN HOUSE
17 WHITMYRE HALL
18 PRATT HALL (STUDENT AFFAIRS BLDG)
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41 McGREGOR HALL
42 SHAFER HALL
43 LAWRENCE HALL
44 SCRANTON HALL
45 CIVIL DEFENSE CENTER (A.C.)
46 ATHLETIC FIELD
47 MILLER STADIUM
48 MEMORIAL FIELD HOUSE
49 TENNIS COURTS
50 THE BRANCH
51 PIERCE MILITARY HALL (R.O.T.C.)
52 TEPEE HOUSE (LAMPISANO HOUSE)
53 BROCE HOUSE
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69 ROONEY HALL
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